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ing the *Bute Docks* thereby save their Owners and Captains from
a making journeys between their *Vessels* and the *Merchants'* and
s, Banks, Custom House, Post Office, &c., &c. ; all of which offices
o the *Bute Docks.*

st information on all matters *will be readily given* on application to
BUTE DOCKS COMPANY, CARDIFF.

"Swansea, you may depend upon it, is destined to become the Ocean Port of England."—Sir H. HUSSEY VIVIAN, Bart., M.P.

SWANSEA.

The Dock accommodation at Swansea consists of the North, South, and Prince of Wales Docks, all supplied with the most modern Hydraulic Machinery, and appliances for Discharging and Loading Cargoes of every description, and fitted throughout with the Electric Light

The Prince of Wales' Dock, constructed for vessels of the largest burthen, possesses one of the largest and deepest Locks in the Bristol Channel. The Docks are surrounded by more than twenty miles of Railway, the property of the Harbour Trust, connecting the Docks with each of the great Railway systems, viz., the Great Western, London and North-Western, and Midland. The Quays upwards of three miles in length, are furnished with 40 Hydraulic and Steam Cranes, and 21 Hydraulic Coal Tips.

The Number of Vessels which entered and cleared in 1889 was 9,280, of 2,603,333 net register tons. The increase in the net Tonnage cleared, compared with the year 1879, was no less than 70·02 per cent., and of Steam Tonnage in the same period 200·15 per cent.

The total Trade of the Port in imports and exports in 1889 amounted to 2,793,217 tons, of the estimated value of £11,036,754. The Tonnage of Imports shows an increase of 48·00 per cent., and of Exports 80·92 per cent., whilst the Gross Revenue resulting from the foregoing discloses an increase of 78·24 per cent., compared with the corresponding figures for 1879.

The quantity of Copper smelted in the Local Works in a year is about 21,000 tons, of the value of £1,631,250; Steel, 500,000 tons, of the value of £2,500,000. The Spelter, or Zinc, manufactured in Swansea forms 19·20th of the whole production of the Kingdom, of the total value of £500,000. One year's make of Tin and Terne Plates in the neighbourhood of Swansea is about six million boxes, valued at £4,000,000 sterling. The total shipment of Tin Plates at Swansea in 1879 was 423,000 boxes, weighing 26,438 tons, which had increased in 1889 to 3,123,348 boxes of 196,396 tons weight, of the value of £2,749,544. The manufacture of Chemicals, Patent Fuel, Welsh Woollen Goods, and Railway and Engineering Plant are also among the Staple trades of the Town and Port. There are over 140 Works of 36 varieties, employing upwards of 30,000 hands, within a radius of four miles from Swansea Harbour.

By the completion of the *Rhondda and Swansea Bay Railway*, Swansea is now the nearest Port to the celebrated *Rhondda Valley*, and the coal known as "*Cardiff Coal*" can be shipped at Swansea under the most favourable conditions. In addition, the line also passes through the *Avon Valley*, a virgin coal field, to which shippers are already directing their attention in view of the partial exhaustion of the older Rhondda Workings. *This Valley lies between Swansea and the Rhondda district, and is therefore many miles nearer to Swansea than to Cardiff or Barry.*

The Mumbles Lighthouse Signal Station is connected with the Post Office system of Telegraphs. Vessels calling for orders can communicate with their owners without lowering a boat—good and sheltered anchorage being found under the Mumbles Head at any state of the tide free. Registered Telegraphic Address: "*Swansea Bay Signal Station.*"

For information on any point connected with the Port and Harbour apply to

JOHN DIXON,
General Superintendent.

Registered Address of Telegrams: "*DIXON, SWANSEA.*"

N.B.—TOWN DUES and BRIDGE TOLLS now abolished.

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THE
"SHIPPING WORLD" YEAR BOOK:
=
A DESK MANUAL
IN
TRADE, COMMERCE, AND NAVIGATION.

EDITED BY
EVAN ROWLAND JONES,
[United States Consul.]

1891.

"Infinite riches in a little room."
C. MARLOWE.

London:
PRINTED AND PUBLISHED
AT THE
"SHIPPING WORLD" OFFICE,
GRESHAM PRESS BUILDINGS, PILGRIM STREET
1891.

PREFACE.

THIS is the fifth issue of the "*Shipping World Year Book*." Important additions and improvements upon former editions have been made; and the present volume contains THE TARIFFS OF ALL NATIONS, AND OF THE COLONIES, completely revised up to November 15th; THE FIRST COMPLETE PORT AND HARBOUR DIRECTORY OF THE BRITISH ISLES ever published, and A DIRECTORY OF THE PRINCIPAL PORTS OF THE WORLD, giving Accommodation, Charges, Tides, Trades, Pilotage, Towage, and Officials; with all necessary information required by Masters, Engineers, and Merchants.

The book also contains, with other information :— Almanack, Admiralty Notes, Agreements, Astronomical Definitions, Balance Sheet of Commerce, a list of British Consuls abroad, and of American Consuls in the United Kingdom; a Table of Consular Fees, Digest of Shipping Acts, Documents required for Clearing Ships, Engineering Notes, Information regarding the Examination of Masters and Engineers, Foreign Moneys, Weights and Measures, Foreign Mails, Freights, Imports and Exports, Instruments of the Weather, Lighthouses, Load-Line Tables, Measurement of Ships, Merchant Shipping Act (Digest), Navies of Europe, Pilotage Laws, Public Debt of Foreign Countries, Powers of the Board of Trade, Postal Information, Rates of Freights, Removal of Wrecks, Sailing Rules, Shipping Terms (Commercial), Stamp Duties, the Suez Canal, Trade Statistics of the most recent dates, valuable scientific information, specially prepared tables, calculators and guides for men engaged in Commerce and Navigation.

The Pilotage and Towage rates are included in the Port Directory instead of under separate headings, thus enabling the reader to have at once before him all the information concerning each port.

We have again to make grateful acknowledgment to many of our subscribers, to the various port authorities of the United Kingdom and the Colonies, and throughout the world, and to Her Majesty's and the United States' Consuls abroad, for excellent and ungrudging service in correcting past errors, supplying new facts, and making the necessary alterations for this Edition of 1891.

THE EDITOR.

*Gresham Press Buildings,
25, Pilgrim Street,
Ludgate Hill, London.*

The Shipping World Year Book

AND

Port Directory.

ALMANACK FOR 1891.

ARTICLES OF THE CALENDAR FOR THE YEAR 1891.

Golden Number	...	...	11	Dominical Letter...	...	D
Epact	...	...	20	Roman Indiction...	...	4
Solar Cycle	...	...	24	Julian Period	...	6604

ECLIPSES.

- May 23rd—Total Eclipse of the Moon, partly visible as a partial Eclipse at Greenwich. 6.29 p.m.
- June 6th—Annular Eclipse of the Sun, visible as a partial Eclipse at Greenwich. 5.2 p.m.
- Nov. 15th—Total Eclipse of the Moon, visible at Greenwich. 3.12 a.m.
- Dec. 1st—Partial Eclipse of the Sun, invisible at Greenwich.

- The Year 5652 of the Jewish Era commences on Oct. 3, 1891.
- Ramadhân (Month of Abstinence observed by the Turks) commences on April 10, 1891.
- The Year 1309 of the Mohammedan Era commences on August 7, 1891.

THE "SHIPPING WORLD" YEAR BOOK ALMANACK, 1891.



THE "SHIPPING WORLD" YEAR BOOK ALMANACK, 1891.

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LORD SALISBURY'S SECOND MINISTRY.

ENTERED OFFICE AUGUST 3, 1886.

Office.	Minister.	Age.	Years in H. of C.	Years in Office.
Prime Minister & Foreign Secretary	LORD SALISBURY	60	18	13½
Lord Chancellor	LORD HALSBURY	68	11	9½
Lord President of the Council ..	VISCOUNT CRANBROOK ..	76	23	13½
Lord Privy Seal	EARL CADOGAN	50	—	9
First Lord of the Treasury	RT. HON. W. H. SMITH	65	22	10½
Chancellor of the Exchequer	MR. G. J. GOSCHEN	59	17	—
Home Secretary	MR. H. MATTHEWS	64	10	4½
Colonial Secretary	LORD KNUTSFORD	—	—	—
Indian Secretary	VISCOUNT CROSS	67	21	10½
War Secretary	MR. E. STANHOPE	45	16	9½
First Lord of the Admiralty ..	LORD G. HAMILTON ..	45	22	10½
Chief Secretary for Ireland	MR. A. J. BALFOUR	43	16	4½
Lord Chancellor of Ireland ..	LORD ASHBOURNE	52	24	7½
President of the Board of Trade.	SIR M. H. BEACH	—	—	—
Chancellor of Duchy of Lancaster	DUKE OF RUTLAND ..	72	46	—
President Local Govt. Board	RT. HON. C. T. RITCHIE	52	16	4½
President Board of Agriculture ..	RT. HON. H. CHAPLIN ..	—	—	—

[The above form the Cabinet.]

POSTAL INFORMATION.

INLAND POSTAGE RATES.—Letters to any part of the United Kingdom (the Channel Islands included), if not exceeding 1 oz., are charged 1d; exceeding 1 oz., but not exceeding 2 oz., 1½d; and ½d for every additional 2 oz. or fraction of 2 oz. An inland letter must not exceed 18 in. in length, 9 in. in width, and 6 in. in depth, except Parliamentary petitions and addresses to the Queen. A letter addressed to a provincial post office to be called for is kept a month; if addressed to a person on board a ship expected to arrive there it is kept two months. Unstamped or unpaid letters are charged double postage on delivery. The Registration Fee for Inland and Foreign letters is 2d.

BOOK OR NEWSPAPER POST.—Any book packet, open at both ends, may be sent to any part of the United Kingdom at a rate of—not exceeding 2 oz., ½d; 4 oz. 1d, 6 oz. 1½d, 8 oz. 2d, 16 oz. 4d, and ½d for every additional 2 oz. On a Newspaper and Supplement ½d; on a Postal Card ½d. No book packet may exceed 5 lbs. in weight, 18 in. in length, 9 in. in width, or 6 in. in depth, unless it be sent to or from a Government office. Newspapers going abroad must be posted within eight days of, and inclusive of day of publication, and must be prepaid.

INLAND PARCEL POST.—For an Inland Postal Parcel of a weight of—not exceeding 1 lb. 3d, 2 lb. 4½d, 3 lb. 6d, 4 lb. 7½d, 5 lb. 9d, 6 lb. 10½d, 7 lb. 1s, 8 lb. 1s 1½d, 9 lb. 1s 3d, 10 lb. 1s 4½d, 11 lb. 1s 6d, to be prepaid in ordinary postage stamps. The dimensions allowed are: Maximum length 3 ft. 6 in., maximum length and girth combined 6 ft.

TELEGRAPHIC AND CABLE RATES.—Throughout United Kingdom 6d for 12 words, including the address; ½d for every additional word. Cables to Austria 4½d per word, Belgium 2d, France 2d, Germany 2d, Holland 2d, Hungary 4½d, Italy 4½d, Norway 4d, Portugal 5½d, Russia in Europe 6½d, Spain 4½d, Sweden 5d, Switzerland 3½d, Turkey in Europe 7d. To the United States, 1s to 1s 6d per word. Australia, 9s 2d to 9s 9d; India, 4s; by Submarine Co. (*via* Turkey), 3s 8d per word.

MONEY AND POSTAL ORDERS FOR THE UNITED KINGDOM.—Sums not exceeding £10 can be remitted by Post Office Order as follows: Under 20s, 2d; 20s and under £2, 3d; £2 and not exceeding £4, 4d; £4 and not exceeding £7, 5d; above £7 and not exceeding £10, 6d. Such Orders must be presented for payment within 12 months. Postal Orders, payable within 3 months, are issued as follows: For 1s or 1s 6d, at ½d; 2s to 10s 6d, 1d; 15s and 20s, 1½d. They are payable not only at any place in the United Kingdom, but can be cashed at Malta, Gibraltar, and Constantinople. Foreign Postal Orders are procurable at moderate rates.

TELEGRAPH MONEY ORDERS (INLAND).—Money can be wired between London, Birmingham, Brighton, Bristol, Cardiff, Leeds, Liverpool, Manchester, Margate, Newcastle-on-Tyne, Portsmouth, Scarborough, Dundee, Edinburgh, Glasgow, Belfast, Cork, and Dublin—in sums not exceeding £10, on payment of cost of Telegram (minimum 9d), and the following commission:—For sums not exceeding £1, 4d; £2, 6d; £4, 8d; £7, 10d; and £10, 1s.

STAMP DUTIES AND REGULATIONS.

INLAND BILLS OF EXCHANGE OR PROMISSORY NOTES.—For any sum not exceeding £5, 1d; £10, 2d; £25, 3d; £50, 6d; £75, 9d; £100, 1s; £200, 2s; and 1s for every £100 or fractional part of £100.

FOREIGN BILLS.—Foreign Bills, drawn in, but payable out of the United Kingdom. If drawn singly, or otherwise than in a set of three or more, the same duty as Inland Bills. If drawn in sets of three or more, for every Bill of each set, not exceeding £25, 1d duty; £50, 2d; £75, 3d; £100, 4d; £200, 8d; £300, 1s; £400, 1s 4d; £500, 1s 8d; £750, 2s 6d; £1,000, 3s 4d; £1,500, 5s; £2,000, 6s 8d; and for every £1,000 or fractional part of £1,000, 3s 4d. Receipt or Discharge for payment of £2 or upwards, 1d. Bills of Lading, 6d. Charter Party, 6d. Affidavit or Declaration, 2s 6d. Agreement, under hand only, of any matter of the value of £5 or upwards, 6d. Bonds to secure any sum, commence at 1s 3d not exceeding £50, and increase 1s 3d for every £50 and fractional part of £50 up to £300, then increase 2s 6d for every £100 and fractional part of £100 and upwards.

FOREIGN MAILS.

No Colonial or Foreign letter to exceed 2 feet in length, or 1 foot in width or depth.

COMPARISON OF BRITISH IMPERIAL WITH METRICAL WEIGHTS AND MEASURES.

MEASURES OF LENGTH.

<i>English.</i>		<i>French.</i>
Inch	= 2·539954 centmtrs.	Millimètre = 0·03937 inch.
Foot	= 3·049449 dcimtrs.	Centimètre = 0·393708 inch.
Yard	= 0·91438348 mètre	Décimètre = 3·937079 inches
Fathom	= 1·82876696 mètre	Mètre = { 39·37079 inches 3·2808992 feet 1·093633 yard
Pole	= 5·02911 mètres.	
Furlong	= 201·16437 mètres.	
Mile	= 1609·3149 mètres.	Kilomètre = 1093·633 yards.
Nautical Mile	= 1855·020.	Myriamètre = 6·2138 miles.
		Nœud = Eng. nautical mile.

SUPERFICIAL MEASURES.

Sq. in. = 0·000645137 sq. mètre.	Acre = 0·404671 hectare.
Sq. ft. = 0·0928968 sq. mètre.	Sq. mètre = 1·193623 sq. yard.
Sq. yd. = 0·836097 sq. mètre.	Are = 0·098845 rood.
Rod = 25·291939 sq. mètres.	Hectare = 2·471143 acres.
Rood = 10·116775 ares.	

WEIGHTS.

(Troy) Grain = 0·065 gramme.	Gramme = { 15·433 troy grs. 0·643 dwts.
Pennyweight = 1·555 gramme.	Kilogrm. = { 15·433·0 troy grs. 2·679 troy pounds. 2·205 avoir- duois lbs.
Ounce = 31·102 grammes.	
Pound (5760 grs.) = { 373·226 grammes. 373·226 kilogramme	
(Avoirdupois) Dram = 1·77 grm.	Myriagramme or 10 kilos = { 22·0462125 lbs.
Ounce = 28·35 grms.	Quintal or 100 kilos = { 220·462125 „
Pound { 453·57 grms. (7000 grs.) = { 453·57 kilo	Tonneau or Millier = 1000 { 0·9842059 of a ton.
Hundredweight = 50·8 klgrms.	
Ton = 1016·0 klgrms.	

MEASURES OF CAPACITY.

Pint = 0·567932 litre.	Litre = { 1·760773 pint. 0·220 gallon.
Quart = 1·135864 litre.	Décalitre = 2·20215 gallons.
Gal. Imp. = 4·54345797 litres.	Hectolitre = 22·0215 gallons.
Peck = 9·0869159 litres.	Kilolitre = 220·215 gallons.
Bushel = 36·347664 litres.	Myrialitre = 2202·15 gallons.
Sack = 1·09043 hectolitres.	
Quarter = 2·907813 hectoltrs.	
Chaldron = 13·08516 hectolitres.	

FOREIGN MONEYS,
AND THEIR VALUES IN ENGLISH AND UNITED STATES
MONEY.

Country.	Monetary Units.	Standard.	Value in English Money.		Value in U.S.
			£	s. d.	\$ cts.
Argentine Republic ..	Peso fuerte	Gold	0	4 2	1 00'0
Austria	Florin.....	Silver	0	1 11	41'3
Belgium	Franc	Gold	0	0 9½	19'30
Bolivia	Dollar.....	Silver	0	3 1	83'6
Brazil.....	Milreis of 1,000 reis..	Gold	0	2 3	54'5
British Possessions in North America ...	Dollar.....	Gold	0	4 0	1 00'00
Central America.....	Peso	Silver	0	3 1	83'6
Chili	Peso	Gold	0	3 9	91'23
China	Tael	Pure Silver	0	6 8½	1 61'00
Cuba	Peso	Gold	0	3 10½	92'58
Denmark	Crown	Gold	0	1 1	26'80
Ecuador.....	Peso	Silver	0	3 1	83'6
Egypt	Pound of 100 piasters.	Gold	1	0 6	4 97'4
France ...	Franc	Gold and Silver .	0	0 9½	19'30
Great Britain	Pound Sterling.....	Gold	1	0 0	4 86'65
Greece	Drachma	Gold	0	0 9½	19'30
German Empire ...	Mark	Gold	0	1 0	23'82
Hayti.....	Dollar.....	Silver	0	4 2	1 00'00
Jamaica	Pound Sterling	Gold	1	0 0	4 86'65
Japan	Yen	Gold and Silver .	0	4 2	99'70
India	Rupee of 16 annas ...	Silver	0	2 0	39'7
Italy	Lira	Gold and Silver .	0	0 9½	19'30
Liberia	Dollar.....	Gold	0	4 0	1 00'00
Mexico	Dollar.....	Silver	0	3 7	90'9
Netherlands	Florin... ..	Gold and Silver .	0	1 8	40'20
Norway	Crown	Gold	0	1 1	26'80
Paraguay.....	Peso	Gold	0	4 2	1 00'00
Peru	Sol	Silver	0	3 0	83'6
Porto Rico	Peso	Gold	0	3 10	92'58
Portugal ...	Milreis of 1,000 reis ..	Gold	0	4 5	1 08'0
Russia	Rouble of 100 copecks	Silver	0	3 2	66'9
Sandwich Islands	Dollar.....	Gold	0	4 2	1 00'0
Spain.....	Peseta of 100 centimes	Gold and Silver .	0	0 9½	19'0
Sweden	Crown.....	Gold	0	1 1	26'80
Switzerland	Franc	Gold and Silver .	0	0 9½	19'30
Tripoli	Mahbub of 20 piasters	Silver	0	3 1	74'8
Tunis ...	Piaster of 16 caroubis.	Silver	0	0 6	12'50
Turkey	Piaster	Gold	0	0 2½	04'0
United States of Colombia	Peso	Silver	0	3 1	83'6
Uruguay	Patacon	Gold	0	3 11½	94'98
Venezuela.....	Dollar.....	Gold and Silver .	0	1 9½	19'3

DISCOUNT PER CENT.

s. d.				s. d.				s. d.			
2½	is	0 6	in a £.	12½	is	2 6	in a £.	22½	is	4 6	in a £
5	"	1 0	"	15	"	3 0	"	25	"	5 0	"
7½	"	1 6	"	17½	"	3 6	"	30	"	6 0	"
10	"	2 0	"	20	"	4 0	"	35	"	7 0	"

CORN MEASURES OF DIFFERENT PORTS,

With their Appropriate Equivalent in English Quarters.

AUSTRIA.		MALTA.	
TRIESTE.— $3\frac{1}{2}$ Stojas = 1 Quarter.		101 Salma = 100 Quarters.	
BELGIUM.		*. * Some take 102 Salma = 100 Quarters	
ANTWERP.—Grain Sold by weight—1,015		MOLDAVIA.	
Kilos = 2,240 Lbs.		PORTUGAL.	
DENMARK.		GALATZ.—100 Kilos = 143 Quarters.	
8 Scheffels = 1 Toende or Tun ; 21 Tuns =		VIENNA. —17 Alquieres = 1 Quarter.	
10 Quarters.		1 Moio = 3 Quarters.	
*. * Some calculate 208 Tuns = 100 Qrs. for		PRUSSIA.	
Wheat, and 210 Tuns = 100 Qrs. for Oats.		DANZIG—MEMEL—KÖNIGSBERG—PIL-	
EGYPT.		LAU.— $56\frac{1}{2}$ Scheffels = 1 Last ; 1 Last =	
ALEXANDRIA.—100 Ardebs of Wheat, &c.		$10\frac{1}{2}$ Quarters.	
= 63 Qrs. ; 100 Ardebs of Beans = 65 Qrs.		ANCLAM—BARTH—WOLGAST—STRAL-	
FRANCE.		SUND.—1 Last = 14 Quarters.	
112 Lbs. (Cwt.) = 50 8-10th Kilogrammes ;		BERLIN AND STETTIN.—1 Last = 13	
100 Litres = 1 Hectolitre ; 2 Hectolitres		1-12th Quarters.	
88 Litres = 1 Qr. ; 36 Litres = 1 Bushel ;		WISMAR.—1 Last = $13\frac{1}{2}$, or sometimes 13	
1 English Ton = 1015 Kilogrammes.		Quarters.	
GERMANY.		RUSSIA.	
BREMEN—HANOVER.—10 Scheffels = 1		PETERSBURG—ODESSA—RIGA.—2 Os-	
Whisp ; 2 Whisps = 1 Last ; 1 Last = $11\frac{1}{2}$		min = 1 Chetwert ; 100 Chetwerts = 72	
Quarters Wheat ; 11 Quarters Barley.		Quarters.	
HAMBURG.—Last of Wheat, Pease,		SEA OF AZOF.—100 Chetwerts = 83 Qrs.	
Beans = $11\frac{1}{2}$ Quarters ; Barley = $10\frac{1}{2}$		SICILY.	
Quarters ; Oats = $10\frac{1}{2}$ Quarters.		PALERMO.—4 Salma of 20 Tumlio, or 5	
ROSTOCK.—1 Last = $12\frac{1}{2}$ Quarters.		Salma of 16 Tumlio = 5 Qrs. old measr.	
HOLLAND.		SMYRNA—(ASIA MINOR.)	
ROTTERDAM.—1 Last = $10\frac{1}{2}$ Quarters		1 Kilo = 1 Imperial Bushel.	
Wheat and Rye ; $10\frac{1}{2}$ Quarters Barley ;		SWEDEN.	
and $10\frac{1}{2}$ Quarters Oats		2 Spann = 1 Tun or Barrel ; 18 Tuns = 10	
GRONINGEN.—1 Last = 10 Quarters Oats.		Quarters.	
ITALY.		*. * Some take $176\frac{1}{2}$ Barrels = 100 Qrs.	
ANCONA.— $104\frac{1}{2}$ Rubbeu = 100 Quarters.		SPAIN.	
GENOA.— $2\frac{1}{2}$ Mini = 1 Quarter.		3 Fanegas = 1 Quarter.	
*. * Some calculate 245 Minas, and some		TURKEY.	
248 Minas = 100 Quarters.		CONSTANTINOPLE.—816 Kilos = 100	
MILAN—VENICE.— $3\frac{1}{2}$ Staja = 1 Quarter.		Quarters.	
NAPLES.—5 2-5th Tomoli = 1 Quarter.		WALLACHIA.	
LEGHORN.—4 Sacchi = 1 Quarter.		IBRAIL.—100 Kilos = 220 Quarters.	
		*. * Some take 222 $\frac{1}{2}$.	

TABLE SHOWING THE USANCE, OR USUAL TERM, AT WHICH
BILLS ARE DRAWN IN LONDON ON THE FOLLOWING
CITIES, AND THE DAYS OF GRACE ALLOWED.

London on	Usance.	Days of Grace.	London on	Usance.	Days of Grace.
Altona	1 month after date	6	Leghorn	3 months after date	...
Amsterdam	1 month after date	6	Leipsic	14 days after accept.	...
Antwerp	1 month after date	6	Lisbon	30 days after sight	6
Augsburg	15 days after sight	...	Madrid	2 months after sight	14
Barcelona	60 days after date	14	Malta	30 days after date	13
Berlin	14 days after sight	3	Milan	3 months after date	6
Bordeaux	30 days after date	10	Naples	3 months after date	3
Bremen	1 month after date	8	Oporto	30 days after sight	6
Cadiz	60 days after date	6	Palermo	3 months after date	...
Dantzic	14 days after accept.	10	Paris*	30 days after date	10
Dresden	14 days after sight	...	Rio Janeiro	30 days after date	6
Frankfort	14 days after sight	4	Rotterdam	1 month after date	6
Geneva	30 days after date	5	Sydney	30 to 90 days af. sight	...
Genoa	3 months after date	30	Venice	3 months after date	6
Gibraltar	2 months after sight	14	Vienna	14 days after accept.	3
Hamburg	1 month after date	12			

No days of grace are allowed on bills payable at sight.

COLONIAL AND FOREIGN WEIGHTS AND MEASURES, WITH BRITISH EQUIVALENTS.

Countries.	Weights for Gold, Silver, &c.	Commercial Weights.	Cloth Measures.	Linear Measures.	Land Measures.	Grain Measures.	Liquid Measures.
AUSTRO-HUNGARY	Tryer grains. Mark ... 4333 The French Met. System has been introduced.	Imper. lbs. Pound 1.19 Centner 123.52 = 100 lbs.	Imper. inches. Ell, Vienna - 30.66 Trieste— Wood 26.60 Silk ... 25.32	Imperial Foot 12.45 inch Mile ... 4.71 miles	Imper. acres. Joch 1.48 Metzen = 4 Viertel, 1.69 Muth = 30 Metzen, 50.76 32 Eimer, 308.65	Imper. bushels. Metzen = 4 Viertel, 1.69 Muth = 30 Metzen, 50.76 32 Eimer, 308.65	Imper. gallons. Eimer ... 12.44 Fuder = 32 Eimer, 308.65
BAVARIA	See German	Empire					
BELGIUM	Same as in	France					
BRAZIL	Same as in	Portugal					
B. AVRES	Same as in	Spain					
CANADA	Same as in	Great Britain					
CHINA	Tael 580	Catty 13.3 = 16 Tael. Picul 133.33 = 100 Catties.	Covid. 14.60	Foot ... 12.12 inch Li ..... .36 mile			
DENMARK	Mark 3633	Pound 1.10 Centner 110.35 = 100 lbs.	Ell 24.71	Foot ... 12.36 inch Mile 4.68 miles	Tondeland ... 1.25 Last = 12 Toendes 45.91	Barrel or Toende 3.83 Last = 12 Toendes 45.91	Viertel 1.70 Oxhoft = 30 Viertel, 51.08 Almud ... 1.151
EGYPT	Rottolo 6654 The French	Rottolo forforo. .93 Metrical System is	P C 26.80 also used.			Kilow 0.9190	
FRANCE	Gramme ... 15.43	Kilogramme . 2.20 = 1000 Grammes. Quintal ... 220.50 = 100 Kilogrammes	Metre 39.37 inch Kilometre, .62 mile = 1000 Metres. Myriametre, 6.21 miles = 10 Kilometres	Metre ... 39.37 inch Kilometre, .62 mile = 1000 Metres. Myriametre, 6.21 miles = 10 Kilometres	Are ..... .025 Hectare 2.47 = 100 Area.	Litre ..... .007 Hectolitre = 100 Litres 2.75	Litre ..... .28 Decalitre = 10 Litres, 2.20 Hectolitre = 100 Litres, 22.
GERMAN EMPIRE	Gramm Same as in	Kilogram France	Metre or Stab. Mile = 7500 Metres = 4.66 miles.	Metre or Stab Mile = 7500 Metres = 4.66 miles.	Ar Same as in the	Liter or Kanne Metrical System of France.	Litre or Kanne
GREECE	Same as in	France					
HAMBURG	Same as in	German Empire					
HOLLAND	Same as in	France			Hektare 2.47 Same as in the	Hektoliter Metrical System of France.	Hektoliter [22, Vat = 100 Kannen

Countries	Weights for Gold, Silver, &c.	Commercial Weights	Cloth Measures	Linear Measures	Land Measures	Grain Measures	Liquid Measures
INDIA	Troy gallons. Tola 18 (Government)	Ser, Govern. 2.06 = 80 Tola. Mauud, Govern. 82 28 = 40 Seers. Chilogramma	Imper. inches. Guz, Bombay 27. Guz, Bengal 36. Covid, Madras 18.6	Imperial miles. Mile Bengal, 1.13	Imper. acres. Bigah, Bengal, 33 = 20 Coitahs. Cawney, Madras	Imper. bushels. Candy, Bombay .. 24.85 = 20 Maunda. Grain is usually sold by weight. Litro	Imper. gallons. Litro
ITALY	Same as in the	Metrical System of	France.	Metro	Same as in the	Metrical System of France.	Litro
JAPAN	Momme .. 58.24	Kin 1.33	Tsune asai .. 12.25	Keng .. 6 feet	Chô 250	Koku .. 5	
MALTA	Libbra ... 4887	Pound 1.74	Canna 82.20	Foot .. 11.17 inch	Salma .. 4.44	Salma 7.93	Barile .. 0.35
MEXICO	Same as in				Same as in Spain		
NORWAY	Same as in				The same as in		
PERSIA	Miskal 47.7	Batman 13.4	Royal Guz 40	Parasang 4 miles		Denmark .. 1.93	
PERU	Same as in					Artaba .. 1.93	
POLAND	See Russia				See Russia		
PORTUGAL	Marc 3541	Pound .. 1.01	Varn 43.20	Foot 12.94 inch	Getra .. 1.43	Moyo = 15 Fanegas, 22.39	Almude 3.64
PRUSSIA	The French	Metrical System is the	legal standard.	League . 3.84 miles	The French	Metrical System is the legal	standard.
RUSSIA	See German	Empire			See German	Empire	
	Pound 6318	Pound .. 1.00	16 Vershocks = 1	Foot .. 12 inch	Declina 2.70	Chetwert .. 5.77	to Quarts = 1
		Pood .. 36.00	Arshin = 2 ft. 4 in. 3 Arshins = 1 Sazhen = 7 ft. 4 in. 900 Sazhens = 1 Verst = 3500 ft. 4 in. Covid 18.			100 " = 72 Quarters	Vedro.
SINGAPORE	Buscal 830	Pecal = 100 Cattes, or 1500 Taels, 13.33	generally in the sale				Gantang 1.04
SPAIN	British weights	and measures are used		of European Goods.	British weights and	measures generally used in	the sale of European
	Grano	Kilogrammo	Metro	Metro	Area	Litro	Litro
	Same as in	the Metrical System of	France.	Same as in France.			
SWEDEN	Marc 3552	Pound .. 1.04	El 23.36	Foot 11.68 inch	Tunestrand 1.20	Tunna, dry = 36 Kapper	Kanna 7
	Centner .. 112.51			Mile 6.64 miles		4.03.	
SWITZ'LAND.	Same as in	France					
TURKEY	Cheque 4957	Oke 2.83	Long Pik 27.90	Berri 1.03 mile		Fortin = 4 Killovas 3.84	100 Almudes
	Assimilated	to the French Metric	System.		Assimilated to the	French Metric System.	
U. STATES	Same as in	Great Britain			Same as in Britain	Same as the former	English measures
	The wet is	frequently reckoned in	100 lbs under the	name of Quintal			

* Liquors are usually sold by weight, except at Calcutta, Madras, Bombay, where the Imperial measures are used for wines and spirits.

SHIPS ENTERED AND CLEARED.

The total number and tonnage of Vessels entered and cleared at the principal ports of the United Kingdom, together with the value of Imports and Exports and the number and tonnage of Vessels registered as belonging to each port in the year 1889.

NAME OF PORT.	TONNAGE.		VESSELS REGISTERED AS BELONGING TO EACH PORT.		TRADE.	
	Entered.	Cleared.	No.	Tons.	Value of Imports.	Value of Exports.
Aberdeen	No. 2,780	No. 2,679	No. 166	Tons. 670,343	£ 855,066	£ 108,010
Aberystwith	348	333	126	10,055	11,424	700
Alloa	1,197	1,470	10	240,113	212,037	119,144
Arbroath	269	266	30	28,079	105,637	4,325
Ardrossan	2,479	2,471	92	264,974	95,770	26,044
Ayr	2,405	2,387	35	300,147	143,407	21,112
Banff	431	411	84	37,221	16,932	46,066
Barnstaple	3,249	3,215	53	174,165	11,942	598
Barrow	2,419	2,404	138	509,580	615,191	401,562
Beaumaris	4,868	5,798	128	1,023,791	53,848	23,661
Belfast	3,926	9,780	297	1,879,304	2,572,533	686,300
Berwick-on-Tweed	382	360	15	35,021	106,609	11,978
Borrowstoness	1,074	968	9	255,779	261,836	196,385
Boston	636	621	50	101,046	749,406	347,744
Bridgwater	3,526	3,518	102	205,473	105,905	2,841
Bristol	8,378	8,090	193	1,263,504	40,976	1,148,095
Campbelltown	1,119	1,093	34	80,758	50,734	8
Cardiff	13,287	13,435	298	6,352,428	2,518,286	6,533,255
Cardigan	578	565	46	20,063	720	..
Carlisle	643	615	..	101,132	22,686	203
Carmarvon	1,837	1,649	253	126,232	13,439	217,048
Channel Islands	1,520	1,433	234	97,778	..	..
Chester	2,696	2,025	117	196,020	65,723	2,011
Colchester	2,776	2,577	199	136,353	26,160	10,358
Coleraine	507	507	6	48,516	8,026	..
Cork	2,116	2,787	159	682,781	1,261,279	11,563
Cowes	21,857	21,859	277	2,024,094	14,418	4,486
Dartmouth	1,006	1,006	69	105,123	15,457	13,218
Dover	3,882	3,005	44	791,228	6,358,164	1,214,942
Drogheda	623	627	27	131,025	7,298	..
	A	C	E	D	G	H

SHIPS ENTERED AND CLEARED.

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Name of Port.	No.	Tons.	No.	Tons.	No.	Tons.	£	£
Dublin	7,902	1,996,333	7,660	1,951,762	370	55,064	2,283,895	94,030
Dumfries	464	23,796	446	23,044	24	2,948	8,528	..
Dundalk	752	120,238	714	115,928	22	3,037	23,736	..
Dundee	1,224	495,376	1,177	466,413	179	116,840	4,484,633	1,005,655
Exeter	976	74,717	983	72,980	29	3,157	152,346	1,147
Falmouth	1,716	216,648	1,757	217,573	116	16,261	151,172	38,495
Faversham	9,871	448,518	9,739	447,113	241	21,646	18,505	16,006
Fleetwood	1,323	442,275	1,303	428,871	125	13,995	1,185,468	22,452
Folkestone	1,375	263,539	1,386	267,474	16	2,890	11,444,810	1,900,814
Fowey	2,380	239,871	2,339	243,388	136	15,216	22,459	169,525
Galway	242	36,598	183	34,705	17	728	192,307	108
Glasgow	9,307	2,789,113	9,984	3,017,558	1,549	2,224,022	12,683,064	14,880,389
Gloucester	4,436	503,457	4,395	488,776	183	9,596	2,329,418	64,247
Goole	2,302	547,862	2,653	668,356	238	25,381	4,803,911	5,756,469
Grangemouth	1,929	717,862	1,951	742,442	49	11,813	2,465,548	866,161
Granton	448	196,563	410	169,517	45	2,758	382,629	81,974
Greenock	7,558	1,571,231	7,755	1,684,660	326	231,900	3,879,804	271,798
Grimsby	1,782	690,422	1,667	714,282	859	68,797	5,774,833	7,492,169
Hartlepool	3,006	871,625	3,061	878,716	290	279,854	1,997,299	1,003,799
Harwich	3,557	737,718	3,316	707,751	125	13,704	14,732,760	3,240,775
Hull	5,414	2,439,617	5,224	2,101,391	835	220,923	26,285,229	16,768,144
Inverness	3,254	369,317	3,197	361,252	65	5,758	63,649	23,275
Ipswich	3,536	264,186	3,590	265,753	136	8,707	267,569	43,713
Isle of Man	3,641	645,445	3,640	645,403	126	12,965	..	..
Kirkcaldy	2,632	712,926	2,608	766,073	14	817	214,219	474,204
Kirkwall	2,805	253,212	2,797	244,948	38	2,320	5,292	20,587
Lancaster	814	124,855	797	121,568	54	8,014	60,058	80
Leith	3,321	1,088,712	3,084	1,056,713	180	90,756	10,236,661	3,361,498
Lerwick	517	86,011	522	86,356	52	2,529	8,465	63,867
Limerick	544	160,366	530	157,079	25	1,308	669,526	7,530
Littlehampton	448	31,733	448	31,343	25	3,176	37,372	..
Liverpool	18,163	8,445,440	17,637	8,295,675	2,313	1,881,862	111,152,007	102,513,722
Llanelly	1,364	186,298	1,355	185,837	31	5,363	32,749	68,439
London	53,535	12,882,271	24,512	7,560,636	2,577	1,327,726	144,711,517	48,251,282
Londonderry	1,859	359,204	1,770	351,992	12	9,711	381,698	3,281
Lowestoft	826	94,723	874	96,657	458	19,605	89,078	14,425
Lynn	979	158,346	973	160,400	87	6,928	709,706	55,504
Maryport	1,396	258,162	1,374	251,738	41	20,243	135,913	544,156
Middlesboro'	3,485	1,436,912	3,538	1,469,848	94	36,648	985,337	3,422,024
Milford	1,689	339,100	1,668	337,274	80	6,251	29,008	1,420
Montrose	555	99,417	529	89,818	35	4,487	331,188	103,571
Newcastle	See	Tyne Ports.	..	..	..	..	..	..
Newhaven	1,822	411,554	1,811	412,264	25	4,535	11,116,617	2,237,900
Newport (Mon.)	9,066	2,177,607	9,155	2,161,683	114	36,437	873,156	2,066,688
Newry	850	262,778	1,905	254,877	26	1,860	103,164	2,694
	A	B	C	D	E	F	G	H

SHIPS ENTERED AND CLEARED.—(Continued.)

Name of Port.	No.	Tons.	No.	Tons.	No.	Tons.	£	£
Padstow	585	34,778	562	34,007	100	8,323	2,265	72
Penance	2,039	248,107	2,022	248,631	77	11,543	61,135	27,188
Perth	100	8,319	112	8,490	9	406	13,762	..
Peterhead	756	83,089	726	82,227	47	4,440	45,679	373,228
Plymouth	4,062	836,361	3,886	785,618	357	30,960	1,435,294	191,077
Poole	1,497	131,645	1,529	130,995	44	2,359	86,232	10,631
Portsmouth	13,516	1,424,658	13,170	1,392,918	253	14,870	320,021	5,462
Preston	214	15,400	210	15,260	59	3,625	6,491	137
Ramsgate	1,062	180,286	1,035	179,736	179	6,757	12,116	..
Rochester	8,999	692,224	8,770	653,962	1,025	56,789	320,364	68,472
Runcorn	4,529	355,386	4,290	343,161	134	8,747	56,834	13,487
Scarborough	389	46,106	387	45,978	147	29,676	7,700	..
Seilly Isles	233	13,380	252	13,475	6	280	..	..
Shields	None	Tyne Ports.	..	..	..	..	..	..
Shoreham	592	97,654	569	97,806	90	12,700	131,467	3,719
Sidbreen	325	35,333	336	36,521	47	1,372	10,797	320
Sligo	761	90,754	702	84,481	16	2,164	243,290	20
Southampton	10,161	1,726,520	9,891	1,683,779	322	72,582	8,904,470	8,341,229
Stockton	902	202,174	909	196,939	26	11,458	312,992	88,851
Stornoway	1,171	180,230	1,151	177,007	16	943	3,620	98,931
Stranraer	704	97,883	696	97,825	9	878	2,131	..
Sunderland	8,263	2,643,956	8,187	2,662,252	309	242,421	2,144,211	734,199
Swansea	6,414	1,383,760	6,384	1,393,285	190	59,228	2,699,213	3,545,710
Taunton	825	115,450	818	113,243	23	2,222	26,162	9,352
Tenmouth	408	68,775	333	50,688	18	657	40,591	..
Tralee	2,621	266,061	2,686	266,522	6	877	162,293	41,337
Troon	16,144	7,207,386	16,634	7,622,036	825	390,206	38,617	..
Tyne Ports	2,144	544,318	2,075	541,331	15	8,151	448,493	7,726
Waterford	470	37,972	456	35,914	33	389	157,240	..
Westport	819	80,042	807	78,844	65	4,198	15,141	..
Wexford	1,022	120,212	982	116,470	25	1,943	265,151	143,141
Weymouth	654	97,196	649	95,441	141	98,907	5,416	..
Whitby	2,368	880,730	2,344	277,356	76	12,448	160,338	175,404
Whitehaven	1,386	167,145	1,277	166,420	38	2,681	26,573	122,437
Wick	399	23,896	397	25,524	28	1,321	910	..
Wigtown	200	53,151	282	51,808	10	577	183,876	16,370
Witcham	1,766	209,568	1,762	210,676	18	9,986	14,820	33,870
Workington	1,209	156,328	1,167	152,200	634	32,582	216,418	29,655
Yarmouth	381,081	8,100,609	349,327	78,397,349	21,419	7,724,159	427,637,595	248,042,257
Totals for the United Kingdom.								

* Total number of British Vessels, including those of other Ports not enumerated above.

† Total, exclusive of Channel Islands.

GREAT BRITAIN'S TRADE WITH THE WORLD FOR 1889.

Showing Nu
Foreign
Exports

and cleared to each
of Imports from and

No. I.—FOREIGN COUNTRIES.

BALANCE-SHEET OF GREAT BRITAIN'S TRADE.—(Continued.)

	No.	Tons.	No.	Tons.	Value, £.	Value, £.
Italy	355	301,098	2	2,334,140	3,230,131	8,020,337
Native Islands, Pacific	4	2,254	5	5,701	59,337	137,104
Japan	51	81,356	31	47,280	977,606	4,055,386
Madagascar	4	1,247	2	1,466	83,618	86,026
Mexico	72	19,680	79	79,991	465,994	1,621,106
Morocco	298	76,603	65	18,805	956,019	717,293
Norway	4,401	1,331,304	3,839	1,205,996	3,497,513	2,332,747
Persia	3	1111	..	..	..	..
Peru	27	41,679	43	44,998	1,293,977	1,073,689
Portugal	350	159,067	774	403,936	3,105,070	2,991,961
Azores	16	7,229	34	20,195	79,245	86,076
Madeira	5	2,690	69	53,185	66,347	135,356
Possessions in W. Africa	9	12,926	208	245,920	107,424	583,743
Do. in E. Africa	2	5,122	20	17,782	53,403	203,021
Do. in India . . . . .	..	..	6	9,357	..	48,601
Roumania	262	268,544	94	87,066	3,204,776	1,308,822
Russia, Nthrn. Ports	3,414	1,792,337	2,442	1,433,532	13,789,674	7,256,101
„ Southern „	813	931,857	226	269,926	13,364,816	1,357,155
Siam	23	23,738	1	656	290,566	72,708
Spain	4,018	2,650,086	2,377	1,438,822	11,558,857	4,907,884
Canary Islands	13	14,230	141	136,934	123,191	436,104
Fernando Po	1	86	..	..	..	8,294
Ports in N. Africa . . . . .	..	..	3	1,311	6,427	3,151
Philippine and Ladrones Islands	51	81,780	26	43,345	104,487	2,767,155
W. I. Islands	20	14,230	207	277,045	2,331,786	1,592,384
Sweden	4,036	1,619,880	3,318	1,397,572	9,207,047	4,059,871
Tripoli	56	59,346	2	1,119	279,910	18,856
Tunis	23	23,641	14	8,697	115,491	90,230
Turkey, European	79	95,065	292	314,973	1,459,321	3,493,403
„ Asiatic (including Cyprus)	223	204,584	110	134,420	3,806,052	3,251,260
Egypt	235	302,215	748	915,765	8,620,602	3,010,637
United States—Atlantic Ports	2,781	4,747,650	1,589	3,394,589	88,763,537	42,893,891
„ Pacific Ports	316	468,054	113	172,543	6,697,938	985,043
Rep. of Columbia	44	62,202	64	92,472	245,290	1,227,600
Venezuela	54	25,323	64	27,557	284,666	802,579
Uruguay	59	45,576	456	480,205	450,531	2,469,663
Whale Fisheries (Northern)	11	2,509	15	4,220	13,870	453
Totals—Foreign Countries	56,520	31,172	56,175	30,291,945	330,371,524	224,275,050

GREAT BRITAIN'S TRADE WITH THE WORLD FOR 1889. 17

GREAT BRITAIN'S TRADE WITH THE WORLD FOR 1889.
No.

		ed.	Cleared.	
			Tons.	No.
	150,017	11,047,341	135,472	9,740,224
		36,477,013	150,935	32,291,505
Totals...	319,031	47,524,354	286,407	42,031,729

VALUE OF PRINCIPAL EXPORTS OF BRITISH PRODUCE, 1889.

	£		£
Alkali... ..	1,572,922	Glass—Plate	243,127
Animals—Horses	984,611	Flint... ..	275,059
Apparel and Slops	4,978,513	Common Bottles	464,742
Arms, Ammunition, and Military Stores—		Other Manufactures, un- enumerated	164,407
Firearms, small	286,713	Haberdashery and Millinery	2,252,141
Gunpowder... ..	273,700	Hardware and Cutlery, un- enumerated	2,989,188
Of all other Kinds	1,171,633	Hats of all sorts	1,327,553
Bags and Sacks, empty	784,708	Implements and Tools of Industry	1,253,093
Beer and Ale	1,857,946	Jute, Yarn	409,651
Biscuit and Bread	596,822	Jute Manufactures—	
Books, printed	1,294,967	Piece Goods	2,730,344
Butter	145,432	Leather, Tanned, Unwrought	1,313,830
Candles, of all sorts	231,397	Wrought, Boots and Shoes	1,789,342
Caoutchouc, Manufactures of	1,125,555	Other Articles, unenu- merated	413,874
Carriage, Carts, &c.—		Saddlery and Harness	574,489
Railway Carriages for Pas- sengers and parts thereof... ..	444,414	Linen, Yarn	849,263
Railway Waggon, Trucks, &c. and parts thereof.	1,530,921	Linen Manufactures—	
Cement	1,231,649	Piece Goods, White or Plain	3,817,013
Cheese	49,168	Checked, Printed or Dyed	326,419
Chemical Products or Pre- parations (<i>See also</i> Dye Stuffs)	2,282,964	Sailcloth and Sails	166,548
Coal, Cinders, &c.—		Thread for Sewing	365,080
Coal	13,838,090	Unenumerated	1,102,405
Coke and Cinders... ..	574,225	Lucifers and Vesta Matches	121,773
Fuel, Manufactured	369,675	Machinery—Steam Engines.	3,827,059
Products of Coal, &c. (including Naphtha, Paraffine, and Oil thereof, Petroleum, &c.)	1,111,825	Of other sorts	11,446,851
Cordage and Twine... ..	490,106	Manure (including Sulphate of Ammonia Manures)	2,050,170
Corn, Grain, and Meal—		Meat—	
Wheat	47,599	Beef, Pork, Bacon & Hams	363,241
Wheat Flour	116,094	Medicines, Drugs, and Medi- cinal Preparations	971,415
Of Other Sorts	277,082	Metals.	
Cotton Yarn and Twist	11,711,749	Iron—Old, for re-manufac- ture	432,175
Cotton Manufactures—		Pig and Puddled	2,988,324
Piece Goods, Unbleached, Grey	20,010,478	Bar (except Railroad)	1,624,576
Bleached, White	12,337,475	Railroad of all sorts	5,330,858
Printed, Dyed, or Coloured	19,035,669	Hoops, Sheets, and Boiler Plates	4,133,667
Of mixed materials (Cotton predomi- nating)... ..	4,651	Tinned Plates	6,030,005
Lace and Patent Net	1,913,547	Wire	832,229
Stockings and Socks	394,643	Cast and Wrought and other Manufactures	5,431,422
Thread for Sewing	2,692,601	Steel, Unwrought	1,699,010
Hosiery and Small Wares	2,404,384	Manufactures	639,863
Dye Stuffs	492,137	Copper, Unwrought	1,536,917
Earthen and China Ware of all Sorts	2,286,688	Wrought or Manufac- tured, Mixed or Yellow Metal	817,430
Fish—Herrings	1,237,837	Of other Sorts	932,463
Of other Sorts	528,802	Brass—Manufactures	486,049
Furniture, Cabinet and Upholstery Wares	856,020	Lead, Pig, Pipe and Sheet	757,830
		Tin, Unwrought	522,750
		Zinc or Spelter—Un- wrought or Wrought	103,834

PRINCIPAL EXPORTS.—(*Continued.*)

	£		£
Oil, Seed	1,490,594	Soap	503,465
Oil and Floor Cloth... ..	819,124	Spirits—British and Irish ...	1,202,559
Painter's Colours and Materials	1,558,579	Stationery, other than Paper	565,735
Paper Hangings	162,348	Sugar, Refined	609,115
Of other Sorts	1,602,075	Telegraphic Wire and Apparatus... ..	1,038,540
Pickles, Vinegar, Sauces, Condiments, Confectionery... ..	1,319,211	Umbrellas and Parasols ...	613,181
Plate, Gold and Silver ...	132,039	Wool, Sheep and Lambs' ...	970,750
Plated and Gilted Wares ...	306,193	Woollen & Worsted Yarn ...	4,341,514
Provisions, unenumerated ...	513,461	Woollen Manufactures—Cloths, Coatings, Stuffs, &c.	6,523,922
Rags and other Materials for making Paper... ..	473,254	Worsted Coatings & Stuffs	10,626,963
Salt	538,513	Flannels	563,068
Silk, Thrown, Twist, and Yarn	509,819	Carpets and Druggets ...	1,271,506
Silk Manufactures—Broad Piece Goods ...	1,474,366	Blankets	571,864
Of other Sorts	1,031,427	Of other Sorts	1,767,569
Skins and Furs of all Sorts...	970,480	OTHER ARTICLES ...	14,094,132
		TOTAL	£248,048,257

PRINCIPAL IMPORTS OF FOREIGN AND COLONIAL PRODUCE, 1889.

	£		£
Alkali	31,753	Cordage and Twine	640,138
Animals, Living—Oxen, Bulls, Cows & Calves	9,069,327	Cork, Unmanufactured ...	269,162
Sheep and Lambs... ..	1,195,132	Manufactured	643,788
Swine	95,373	Corn, Grain and Meal—Wheat	22,510,502
Horses	277,388	Other kinds of Corn and Grain	19,904,626
Bacon and Hams	9,795,292	Wheatmeal and Flour ...	8,543,908
Beards, of all Sorts	78,216	Other kinds of Meal and Flour	226,615
Beef, Salted and Fresh ...	3,395,932	Cotton, Raw	45,642,028
Bones, of all Kinds (except Whalefins)	390,740	Yarn	474,561
Books	270,599	Manufactures—Piece Goods	657,274
Brimstone	172,787	Other kinds of	1,813,764
Bristles	470,929	Drugs—Bark, Peruvian ...	429,010
Butter	10,244,636	Opium	298,436
Butterine (Margarine) ...	3,655,061	Unenumerated	814,593
Buttons and Studs, not of Metal	369,566	Dyeing or Tanning Stuffs—Bark... ..	204,087
Candles, of all Sorts... ..	98,122	Cochineal, Granilla & Dust	50,749
Caoutchouc	2,617,369	Cutch and Gambier ...	675,820
Manufactures of	318,439	Dyes obtained from Coal Tar	609,236
Cheese	4,490,970	Indigo	1,777,617
Chemical Manufactures and Products	1,414,996	Madder, Madder Root, Garancine & Munjeet	17,184
Chicory, Raw or Kiln-dried	58,222	Safflower	830
China or Porcelain, and Earthenware	650,222	Shumach	140,517
Clocks (and parts thereof)...	454,556	Valonia	454,630
Cocoa	801,199	Substances and Extracts, unenumerated ...	805,179
Coffee	4,319,372		
Confectionery... ..	28,907		

PRINCIPAL IMPORTS.—(Continued.)

Dye Woods—Logwood ...	£ 443,656	Manures—Unenumerated ..	£ 124,157
Unenumerated	96,004	Matches	368,652
Eggs	3,127,590	Meat, Unenumerated—	
Embroidery and Needlework	321,085	Salted or Fresh	177,678
Feathers, for Beds	115,462	Preserved, otherwise by	
Ornamental	823,007	Salting	1,634,223
Fish	2,588,623	Metals—	
Flax, Dressed & Undressed,		Copper Ore and Regulus..	4,234,619
and Tow	3,066,328	Unwrought, part wrought	
Flowers, Artificial	345,283	and Old Copper ...	2,120,564
Fruit—		Manufactures, unenu-	
Almonds	412,241	merated	58,073
Apples, Raw	974,405	Iron, Ore	3,024,605
Currants	1,420,708	In Bars	1,033,974
Figs and Fig Cake ...	255,768	Steel, Unwrought ...	96,720
Oranges and Lemons ...	1,731,635	Iron and Steel, Manufac-	
Raisins	910,676	tures of, unenumerated	2,490,493
Raw, unenumerated, ...	1,147,439	Lead, Pig and Sheet ...	1,875,287
Galls	83,734	Silver Ore	2,228,791
Glass, of all Kinds	1,782,193	Tin, in Blocks, Ingots,	
Guano	199,783	Bars, or Slabs	2,797,274
Gum—Arabic... ..	243,013	Zinc, Crude in Cakes ...	1,074,943
Kowrie	149,396	Manufactures	416,735
Lac, Seed, Shell, Stick,		Metal, not otherwise	
and Dye	276,296	enumerated, Wrought	270,774
Of other sorts	405,513	Milk, Condensed	704,849
Gutta Percha... ..	575,029	Musical Instruments ...	894,687
Hair—Cow, Ox, Bull, or Elk		Mutton, Fresh	2,575,396
Goats' Hair or Wool ...	134,862	Nuts and Kernels—	
Horse	994,396	For expressing Oil there-	
Manufactures of Hair, and	178,648	from	684,635
of Goats' Wool	142,031	Of other Sorts (including	
Hats and Bonnets—		“ Nuts, for Fruit ”) ...	599,802
Of Felt	93,382	Oil—	
Of Straw	95,635	Train or Blubber & Sperm	440,360
Hemp, Dressed & Undressed,		Animal	235,354
and Tow	3,398,190	Cocoa Nut	277,602
Hides—Raw	3,077,434	Olive	817,495
Hops	713,094	Palm... ..	1,091,922
Horns and Hoofs	173,344	Seed	461,691
Isinglass	90,892	Turpentine	662,681
Ivory—		Chemical, Essential, and	
Teeth, Elephant's, Sea		Perfumed	192,340
Cow, and Sea Horse..	573,820	Oil Seed Cake	1,701,106
Jute	5,428,713	Onions, Raw	672,079
Yarn... ..	97,224	Painters' Colours & Pigments	1,031,721
Lace	1,032,619	Paper and Pasteboard—	
Lard	2,176,332	Of all Kinds (except	
Leather	6,673,844	Hangings)	1,857,743
Leather Manufactures—		Paper Hangings... ..	49,568
Boots and Shoes	350,856	Paraffine	374,887
Gloves	1,705,516	Petroleum	2,588,947
Unenumerated	338,136	Pictures and Drawings by	
Linen—Yarn	769,398	Hand	392,065
Manufactures	427,364	Pitch and Tar—Pitch ...	26,893
Liquorice	81,226	Tar	99,849
Manganese, Ore of	281,446	Plumbago	163,336
Manures—		Pork, Salted and Fresh ...	678,922
Phosphate of Lime and		Potatoes	736,039
Rock	703,704	Poultry and Game	473,193
		Pyrites of Iron or Copper ...	1,211,791
		Quicksilver	547,752
		Rabbits	341,733

PRINCIPAL IMPORTS.—(Continued.)

	£		£
Rags, and other materials for making Paper—		Spirits—	
Linen and Cotton Rags ...	426,322	Sweetened and Perfumed, of all Kinds ...	201,640
Esparto, & other Materials ...	2,087,495	Stones, &c. ...	625,458
Rags, Woollen, applicable to other uses than Manure ...	669,438	Straw Plaiting for Hats or Bonnets ...	659,855
Rice ...	2,683,600	Sugar—Refined and Candy ...	8,839,322
Rosin ...	291,567	Unrefined ...	13,614,519
Sago ...	280,339	Molasses ...	143,662
Other Farinaceous Substances ...	1,000,353	Glucose ...	483,321
Saltpetre ...	291,021	Tallow and Stearine ...	1,645,801
Cubic Nitre ...	1,102,583	Tea ...	9,987,967
Seeds—Clover and Grass ...	607,853	Tobacco—Unmanufactured ...	2,168,709
Cotton ...	1,906,220	Manufactured, Cigars and Snuff ...	1,721,775
Flax and Linseed ...	4,570,203	Toys ...	714,828
Rape ...	805,366	Vegetables, Raw, unenumerated ...	621,760
Tares and Lentils ...	69,244	Watches ...	691,006
Unenumerated, for Expressing Oil therefrom ...		Wax ...	108,857
Of other Sorts ...	303,254	Whalebone (Whalefins) ...	177,179
Shells ...	241,966	Wine ...	5,905,473
Silk, Raw ...	2,192,548	Wood and Timber—	
Knubs or Husks of Silk, and Waste ...	899,474	Hewn ...	5,636,764
Thrown ...	510,734	Sawn or Split ...	13,143,881
Manufactures ...	11,789,139	Staves ...	694,098
Skins and Furs—		Furniture & Hardwoods—	
Skins—Sheep and Lamb, undressed ...	1,243,792	Mahogany ...	354,501
Goat, undressed ...	715,912	Unenumerated ...	608,112
Seal ...	674,467	House Frames, &c. ...	591,753
All other Sorts ...	78,555	Wool—Sheep and Lambs' ...	28,361,870
Furs, of all Sorts ...	1,023,175	Alpaca, Vicuna, and Llama ...	252,867
Manufactures of ...	620,542	Goats' Wool or Hair. See Hair ...	
Spices—Cinnamon ...	52,987	Woolen, Yarn ...	2,443,796
Ginger ...	97,716	Manufactures ...	9,784,068
Pepper ...	856,492	Yeast ...	723,320
Unenumerated ...	419,096	ALL OTHER ARTICLES ...	15,440,435
Spirits—Brandy ...	1,316,137	TOTAL ...	£427,262,983
Geneva ...	52,752		
Rum ...	340,026		
Unenumerated, not sweetened ...	144,293		

VALUE OF THE PRINCIPAL AND OTHER ARTICLES OF FOREIGN AND COLONIAL PRODUCE AND MANUFACTURES EXPORTED.

	£		£
Arms and Ammunition ..	40,973	Cocoa ..	259,895
Bacon and Hams ..	469,723	Coffee ..	3,669,841
Beads of all Sorts ..	51,543	Confectionery ..	12,252
Butter ...	370,048	Cordage and Twine ..	114,138
Margarine ..	70,975	Corn, Grain, and Meal—	
Candles of all Sorts ..	91,177	Wheat ..	143,788
Caoutchouc ..	1,411,554	Other kinds of Corn and Grain ..	155,521
Cheese ...	174,267	Wheatmeal and Flour ..	113,175
Chemical Manufactures and Products ..	332,834	Other kinds of Meal and Flour ..	9,529
		Cotton—Raw ..	5,871,600

PRINCIPAL EXPORTS.—(Continued.)

	£		£
Cotton—Yarn.. ..	6,858	Nuts and Kernels, for ex-	
Manufactures	580,202	pressing Oil therefrom	454,712
Drugs—Bark, Peruvian ..	257,680	Oil—Coco-nut	103,827
Opium	229,330	Olive	146,293
Unenumerated	365,844	Palm.. ..	655,331
Dyeing or Tanning Stuffs—		Paper, of all Kinds (except	
Cochineal	37,320	Hangings)	98,601
Cutch and Gambier ..	292,284	Quicksilver	485,256
Indigo	1,170,460	Rags and other Materials	
Unenumerated	119,996	for making Paper ..	430,117
Dye Woods—		Rice	1,409,255
Logwood & all other sorts	54,206	Seeds—Flax and Linseed ..	492,221
Farinaceous Substances (in-		Rape	136,802
cluding Sago).. ..	163,388	Unenumerated for ex-	
Feathers, Ornamental ..	442,219	pressing Oil therefrom	220,579
Fish	476,902	Silk & Silk Manufactures—	
Flax, Dressed & Undressed,		Raw	263,503
and Tow	151,594	Knubs or Husks of Silk,	
Fruit—Almonds	173,991	and Waste	110,835
Currants	77,394	Thrown	22,934
Oranges and Lemons ..	148,874	Manufactures	962,602
Raisins	125,236	Skins, Furs, and Pelts—	
Raw, unenumerated ..	72,324	Goat, undressed	620,343
Glass, of all Kinds	158,333	Sheep, undressed	114,792
Guano	31,178	All other Sorts	1,119,859
Gum—Arabic	123,814	Spices—Cinnamon	41,179
Kowrie	46,574	Pepper	634,067
Lac, Seed, Shell, Stick,		Unenumerated	348,258
and Dye	241,636	Spirits—Brandy	65,339
Of other Sorts	198,541	Rum.. ..	173,319
Hemp, Dressed & Undressed,		Other Sorts, not Sweet-	
and Tow	1,416,169	ened, including various	
Hides, Raw	1,202,904	Kinds mixed in Bond	72,251
Hops	32,248	Sugar—Refined and Candy	167,932
Ivory. Teeth, Elephants',		Unrefined	624,206
Sea Cow, Sea Horse,		Molasses	69,093
or Sea Horse	377,718	Tallow and Stearine.. ..	378,649
Jute	1,745,267	Tea	1,742,205
Lard	171,979	Tobacco, Unmanufactured..	162,407
Leather	1,532,519	Manufactured, of all Kinds	277,363
Manufactures, Boots and		Wax	39,791
Shoes	39,105	Wine	678,707
Meat, Preserved, otherwise		Wood and Timber—Hewn..	94,923
than by Salting	98,360	Sawn or Split, Planed or	
Metals—		Dressed	108,079
Copper, Unwrought, part		Furniture and Hardwood,	
Wrought, and Old		of all Sorts	110,980
Copper.. ..	715,761	Wool, Sheep and Lambs' ..	15,417,521
Iron Bars, Angle, Bolt,		Woollen Manufactures ..	810,332
and Rod	564,265	ALL OTHER ARTICLES..	8,018,698
Steel, Unwrought.. ..	60,669	TOTAL.. ..	£66,657,424
Iron and Steel, Wrought			
or Manufactured, un-			
enumerated	570,427		
Lead, Pig or Sheet ..	180,618		
Tin, in Blocks, Ingots,			
Bars, or Slabs.. ..	1,629,139		
Milk, Condensed	235,655		
Musical Instruments ..	83,509		

TOTAL SHIPPING TRADE OF GREAT BRITAIN & IRELAND IN THE PAST THREE YEARS.

	Vessels Entered.		Vessels Cleared.		Total Number of Vessels Registered.		Total Number of Vessels Employed.		Total Number of Persons Employed.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	British.	Foreigners.
1897	357,405	77,664,486	339,084	71,978,474	36,728	9,135,512	17,783	7,123,754	160,912	94,046
1898	377,459	81,525,727	341,979	76,510,792	36,468	9,809,883	17,384	7,351,888	179,969	25,277
1899	381,083	83,048,629	349,397	78,397,349	36,469	9,472,060	17,554	7,642,154	183,473	26,847

TOTAL NUMBER OF SHIPS BUILT IN THE UNITED KINGDOM DURING THE PAST THREE YEARS
(Exclusive of Vessels built for Foreigners)

	Iron.		Steel.		Wood.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
1897	44	46,557	34	25,235	179	9,357	257	81,110
	76	18,910	227	205,907	16	610	321	225,437
	120	65,467	261	231,142	197	9,967	578	306,546
1898	55	20,999	38	45,614	196	9,083	269	75,696
	91	26,183	350	379,358	24	1,904	465	477,445
	146	47,182	388	424,972	200	10,987	734	483,141
1899	24	15,118	62	93,272	191	9,092	277	117,481
	113	35,386	445	518,074	23	553	582	554,024
	137	50,504	507	611,345	214	9,645	859	671,905

VALUE OF TOTAL IMPORTS AND EXPORTS OF MERCHANDISE DURING FIVE YEARS.

	1895	1896	1897	1898	1899
IMPORTS	£ 370,667,472	£ 349,863,472	£ 362,227,564	£ 387,615,743	£ 427,637,595
EXPORTS—British Produce	£ 213,044,500	£ 212,432,754	£ 221,414,186	£ 233,842,607	£ 224,275,950
Foreign & Colonial Produce	58,359,194	56,234,663	59,348,975	64,042,609	90,429,791
Total Exports	£ 271,403,694	£ 268,667,417	£ 280,763,161	£ 297,885,216	£ 314,705,741
Total of Imports and Exports	£ 642,371,649	£ 618,530,489	£ 642,990,725	£ 685,500,959	£ 742,343,336

DEFINITION OF ASTRONOMICAL TERMS.

Aberration.—An apparent change of place in the fixed stars, which arises from the motion of the earth combined with the motion of light.

Altitudes.—The Altitude of an object is that portion of a vertical circle which is intercepted between the centre of the celestial object and the horizon.

Aphelion.—That point in the orbit of a planet in which it is at its greatest distance from the sun.

Apogee.—That point in the orbit of the moon or a planet in which it is at its greatest distance from the earth.

Azimuths.—The Azimuth of an object is its true bearing, east or west, of its nearest meridian. It is always equal to that portion of the horizon which is intercepted between the vertical circle passing through the centre of the object and the meridian of the place of observation.

Declination of a Celestial Object.—The Declination of any celestial object is its distance north or south from the equinoctial, and is measured by that portion of the celestial meridian which is intercepted between the centre of the object and the equinoctial.

Disk of the Sun or Moon is its round face, which, on account of the great distance of the object, appears flat as like a plane surface.

Diurnal—Diurnal motions of the planets are the spaces they move through in a day.

Elongation.—The angular distance of a planet from the sun as it appears to us upon the earth.

Emerison.—The time when any planet which is eclipsed begins to recover its light again.

The Horizon.—The visible horizon is that which is seen while the eye is elevated above the surface; and the sensible is that which is seen when the eye is on a level with the water. The depression of the former below the latter is called the dip of the visible horizon.

Immersion.—The moment when an eclipse begins, or when a planet enters into a dark shadow.

Libration.—An apparent irregularity of the moon's motion, which makes her appear to librate about her axis in such a manner that parts of her eastern and western limbs become visible and invisible alternately.

Parallax.—Parallax is the difference between an altitude taken at the surface of the earth, and that taken at the centre at the same time. When the object is on the horizon, it is called the horizontal parallax; but in any other case it is called the parallax in altitude.

Penumbra.—A faint shadow which accompanies an eclipse and occasions a partial obscurity of the body to that part of the earth on which it falls.

Perigee.—That point of the moon or a planet's orbit in which it is at its least distance from the earth.

Perihelion.—That point of a planet's orbit in which it is at its least distance from the sun.

Phases.—The several appearances of the moon and planets, according as a greater or less part of their illuminated hemispheres are presented to our sight.

Prime Vertical Circle.—The Prime Vertical Circle is the circle which passes from the zenith due east or west, having 90 degrees of the horizon intercepted between it and the meridian. All objects on this circle are said to be on the prime vertical.

Polar Distance of any celestial object, is an arc of a meridian, contained between the centre of that object and the pole of the equinoctial ; or, in other words, it is the distance of the object from the elevated pole.

Refraction.—Refraction is a quantity by which a body appears above its true place in the heavens.

Right Ascension.—The Right Ascension of a celestial body is that portion of the equinoctial which is intercepted by a celestial meridian passing through the centre of the body and the first point of the ecliptic. It is generally given in time.

Right Ascension of the Meridian.—The Right Ascension of the Meridian is that part of the equinoctial that comes to the Meridian with the object measured from the first point of Aries.

Terrestrial and Celestial Equators.—The Terrestrial Equator is a great circle (supposed to be described) around the earth, at an equal distance, or 90 degrees from the poles, dividing the globe into two equal parts ; the part to the southward of the equator being called the southern hemisphere, and that to the northward the northern hemisphere.

The Celestial Equator, commonly called the Equinoctial, is an imaginary circle described in the heavens, corresponding to and coinciding with the terrestrial equator.

Time.—Time is measured by the apparent motion of a celestial body over the surface of the globe, and is called Solar, Lunar, or Sidereal, according to the body with which it is referred ; a full revolution of either of these objects is called its apparent day, and begins when the object comes to the meridian ; but for the convenience of civil and commercial business, that of the sun, called solar or civil time, is from midnight to midnight, the first twelve hours of which are marked A. M., signifying ante meridian, and the last twelve hours P. M., signifying post meridian. In this and the following mode of keeping time, the day is dated as soon as it commences.

Astronomical Day.—This day is also measured by the apparent motion of the sun, but for the convenience of astronomical computations, it is taken to begin at noon, that is, 12 hours after the beginning of the civil day, and end at noon of the following day. Astronomers generally reckon the hours of this day up to 24 hours, without any distinction of ante or post meridian, which they call astronomical time ; hence the first 12 hours of which are the P. M. hours of the civil day on which it begins, and the last 12 hours of it are the A. M. hours of the day on which it ends.

The Nautical Day.—This day, as well as the civil and astronomical day, is measured by the apparent motion of the sun. It begins just with the astronomical day, but it is dated with the noon on which it ends ; hence it is 24 hours in date later than the astronomical day, the first 12 hours of which are marked in the journal with P. M., and the last 12 hours with A. M., so that occurrences which happen on the afternoon of the civil day on which it begins, come in the journal under the date of the civil day in which it ends. The Log Book is generally kept in nautical or Sea Time, but it may be kept in Common or Civil Time.

Tropics.—The Tropics are two circles (supposed to be described) parallel to the equator, at the distance of about $23^{\circ} 28'$, equal to the highest-declination. The northernmost is called the Tropic of Cancer, and the other the Tropic of Capricorn.

Twilight.—The Twilight is that duration of light which is apparent in the absence of the sun. It generally continues whilst he is traversing about 18 degrees below the horizon. It is caused by the column of atmosphere which surrounds the earth receiving the rays, or light, of the sun, and from which that light is transmitted to those parts of the surface of the globe opposite the sun at its rising and setting.

Vertical Circles.—Vertical Circles are circles (supposed to be described in the heavens) perpendicular to the horizon, and meeting at the Zenith. They are sometimes called circles of altitudes, circles of azimuths, and prime vertical circles.

Zenith and Nadir.—The Zenith is that point in the heavens which is directly over the observer's head; and the Nadir that which is opposite to it.

Zenith Distance.—The Zenith Distance of a celestial object is equal to that portion of the vertical circle which is intercepted between the centre of the object and the observer's zenith. It is always equal to the complement of the altitude to a quadrant, or 90 degrees.

EXPLANATION OF COMPASS TERMS.

Variation of the Compass is the angle between the True North and the Magnetic North. This difference or error arises from the Magnetic Poles not coinciding with the Terrestrial ones, and is due entirely to the influence of the earth on Magnetic Needles, which is the same at few parts of the world.

Deviation of the Compass is the angle included between the Magnetic North and the Compass North. This error is due to the disturbing influences of the iron of which the ship is built, as rudder-posts, masts, chains, funnel, &c.; her position when building, her cargo, or other causes *within* the ship.

Local Attraction is the error caused by some disturbing force *outside* the ship, and belonging entirely to the locality at which a ship may be—as mooring posts or chains, dock cranes, another iron vessel alongside, volcanic or magnetic influences, &c.

Heeling Error is the effect produced on the Compass by the heeling of an iron or composite ship, the angle increasing with the amount of Heel.

Lee-way is the angle between the ship's course by Compass and the direction which she makes through the water, as shown by her wake.

Compass Course is the course steered by ship's Compass.

Magnetic Course is the Compass Course corrected for Deviation and Leeway.

The True Course of a Ship is the Compass Course corrected for Deviation, Leeway, and Variation.

EXPLANATION OF ASTRONOMICAL CHARACTERS.

☉ The Sun.	♃ Ceres.
☾ The Moon.	♄ Juno.
☿ Mercury.	♃ Jupiter.
♀ Venus.	♄ Saturn.
♁ The Earth.	♅ Uranus.
♂ Mars.	♆ Neptune.
♊ Ascending Node.	♋ Descending Node.

SIGNS OF THE ZODIAC, &c.

♈ Aries (the Ram), 0°	* Sextile, when two signs distant, or differing 60° in Longitude or Rt. Ascension.
♉ Taurus (the Bull), 30°	□ Quartile, when three signs distant, or differing 90° in Longitude or Rt. Ascension.
♊ Gemini (the Twins), 60°	♌ Opposition, when six signs distant, or differing 180° in Longitude or Rt. Ascension.
♋ Cancer (the Crab), 90°	
♌ Leo (the Lion), 120°	
♍ Virgo (the Virgin), 150°	
♎ Libra (the Balance), 180°	
♏ Scorpio (the Scorpion), 210°	
♐ Sagittarius (the Archer), 240°	
♑ Capricornus (the Goat), 270°	
♒ Aquarius (the Waterbearer),	
♓ Pisces (the Fishes), 330° [300°	
♌ Conjunction, in the same degree or sign, or having the same Longitude or Rt. Ascen.	

N. North.	'	Mins. of Arc.
S. South.	"	Secs. of Arc.
E. East.	h.	Hours.
W. West.	m.	Mins. of Time.
° Degrees.	s.	Secs. of Time.

TERMS AND ABBREVIATIONS USED IN SHIPPING.

- A/c.—Account. E. E.—Errors excepted.
 E. & O. E.—Errors and omissions excepted.
 F. O. B.—Free on board. F. P. A.—Free of particular average.
Inst.—Instant, present month. C/I/F.—Cost, Insurance & Freight.
Prox.—Proximo, next month. *Ult.*—Ultimo, last month.
 D/D.—Days after Date. M/D.—Months after date.
 D/S.—Days after sight. %—Per cent.
 @—At, to. ₧—Per. B/L.—Bill of Lading.
Ad valorem.—According to value.
Adjustment.—The settlement of a loss incurred by the insured.
Adventure.—Goods consigned to a party to be made the most of.
Agio.—The Premium borne by a better sort of money above an inferior.
Appraise.—To value goods imported.
Assets.—A term for property and money in contradistinction to liabilities.
Assurance.—See *Insurance*.
Average.—A sacrifice made to prevent the total loss of a ship or cargo; an average of the loss insured for the benefit of all concerned, to be made good proportionately.
Award.—The decision in arbitration.
Banco.—A continental term for bank money at Hamburg and other places.
Barratry.—A fraudulent act on the part of the master or crew of a vessel, against the interest of the owners. Insurances are effected against barratry.
Bill of Health.—A certificate granted by Consuls and Customs Officers as to health of port.
Bill of Lading.—A master's acknowledgment and undertaking as to receipt and delivery of goods or cargo.
Bottomry.—Money borrowed on a ship's bottom or hull, to be repaid with interest if the ship return in safety, but if not to be lost or forfeited. Sometimes it is raised on the lading and master's personal security; see *Respondentia*.
Brokerage.—The commission charged by merchants and brokers for securing and transacting business for ships.
Charter Party.—A contract with the owner, agent, or master for the service of his vessel.
Consul.—The commercial representative of one country residing officially in another.

Credit, Letter of.—A letter written by one party to another, requesting the party addressed to advance the bearer or person named a certain sum of money.

Days of Grace.—Days allowed by law or custom for payment of Bills of Exchange (except those payable at sight or on demand) after specified day of payment ; thus, when three days are allowed, as usual in England, a bill due on the 5th of the month is payable on the 8th.

Dead Freight.—The damage payable by one who engages to load a ship fully, and fails so to do.

Debenture.—An instrument of the nature of a bill or bond, by which a debt is claimable. May bear interest or confer some peculiar advantage. It is given at the Custom House to claim a drawback.

Derelict.—Goods cast away or relinquished by wreck or otherwise. Reductions in duty are also made proportionate to the damage on them.

Deviation is a divergence from the voyage insured which may release the underwriter from his risk.

Drawback.—An allowance granted by Government to encourage exportation of an article, or a return of duties paid upon certain articles on exportation.

Discount.—An allowance made for money paid before it is due. To discount a Bill is to buy from the holder the right to receive the money upon it when due.

Dunnage.—Articles used in stowing a cargo or trimming a ship.

Embargo.—An order issued by Government to prevent vessels sailing.

Flotsam.—Goods floating after a wreck. *Jetsam* are those sunk. *Lagan* are those sunk but secured by a buoy.

Groundage.—Money paid in some parts for permission to anchor.

Insurance.—A contract whereby, for a stipulated consideration, called a premium, one party undertakes to indemnify the other against certain risks.

Invoice.—A document enumerating goods sold from A to B. Where the goods are exported by A to be sold on his own account, the document is a specification, and not, strictly speaking, an invoice.

Lay Days.—Days allowed by charter for loading or unloading ships.

Lighterage.—The expense of a lighter or barge.

Manifest.—The specification of a cargo made out and signed by the master of a ship.

Policy.—A document containing the contract of insurance. A *Valued Policy* is when the interest insured is valued. An *Open Policy* is one in which the amount is left for subsequent proof. In an open policy, where the value shipped does not equal the value insured, the difference is termed *over insurance* ; and the proportionate amount of premium returnable to the insurer is called *a return for short interest*.

Frimage.—A small allowance for the shipmaster's care of goods now generally included in the freight.

Pro rata.—Payment in proportion to the interests concerned.

Quid pro quô.—Giving one thing for another.

Respondentia.—A contract of loan by which goods in a ship are hypothecated to the lender, as in bottomry.

Super Cargo.—A person sent with a vessel to dispose of its cargo to the best advantage.

EDUCATIONAL STANDARD REQUIRED BY VARIOUS MARITIME POWERS FOR MASTERS AND MATES.

France.	Holland.	Belgium.	Germany.	England.
Algebra	Yes.	Yes.	Yes.	No.
Geometry	"	"	"	"
Trigonometry.....	"	"	"	"
Mechanics	No.	"	"	"
Physics	Yes.	"	"	"
Steam Engine	"	"	"	"
Languages.....	"	"	"	"
Winds and Currents	"	"	"	Yes.
Navigation	"	"	"	"
Nautical Astronomy	"	"	"	"
" Survey	"	"	"	No.
Instruments	"	"	"	Yes.
Observations.....	"	"	"	"

A I R.

In its pure state air is composed as follows :—

Nitrogen.....	77 per cent.
Oxygen	21 do.
Other components	2 do.
100	

The percentage of oxygen varies as follows :—

Sea-shore	21 per cent.
Mines	20'50 do.
Confined Houses.....	20'75 do.

Air travels in England in healthy years at the rate of about 4½ miles per hour, and in unhealthy years about 3½ miles per hour. Each adult inhales a gallon of air per minute, and consumes daily 30 oz. of oxygen. For the conversion of this oxygen a certain amount of food is required—say 13 oz. of carbon for a male and 11 oz. for a female—equivalent to 3lb. and 2½lb. of bread respectively.

THE POWER OF THE WIND.

Figures to denote the Force of the Wind.	Description of Wind.	POWER OF THE WIND as regards a well-conditioned Man-of-War or First-class Clipper Ship.	Rate of the Wind per Hour in Miles.
0	Calm .....	.....	0 to 2
1	Light Air	Just sufficient to give steerage way	3 — 10
2	Light Breeze ..	With which the above Ship { 1 to 2 knots.. with all sail set and clean { 3 to 4 " .. full would go in smooth { 5 to 6 " .. water.....	11 — 15
3	Gentle Breeze ..		16 — 20
4	Moderate Breeze		21 — 25
5	Fresh Breeze ..	In which she could { Royals, &c. just carry in chase- { Single Reefs and full and by..... { T.G. Sails..... Double Reefs and Jib, &c..... Triple Reefs, &c. .. Close Reefs & Courses	26 — 30
6	Strong Breeze ..		31 — 36
7	Moderate Gale..		37 — 44
8	Fresh Gale		45 — 52
9	Strong Gale		53 — 60
10	Whole Gale	In which she could just bear close-reefed Main Topsail and reefed Foresail	61 — 69
11	Storm	Under Storm Staysail	70 — 80
12	Hurricane	Bare Poles	above 80

FORMULA FOR RECORDING STATE OF THE WEATHER.

B	denotes Blue Sky, <i>i.e.</i> clear or hazy atmosphere.	U	denotes Ugly, with a heavy appearance of the weather.
C	„ Cloudy — detached opening clouds.	V	„ Visibility of distant objects.
D	„ Drizzling Rain.	W	„ Wet dew.
F	„ Fog—FF Thick Fog.		. Dot under any letter, an extraordinary degree.
G	„ Gloomy—dk. weather		By the combination of these letters all the ordinary phenomena of the weather may be recorded with certainty and brevity.
H	„ Hail.	BCM	—Blue sky, with detached opening clouds, but hazy round the horizon.
L	„ Lightning.	GV	—Gloomy dark weather, but distant objects <i>remarkably</i> visible.
M	„ Misty or Hazy—so as to interrupt the view		
O	„ Overcast— <i>i.e.</i> , whole sky covered with an impervious cloud.		
P	„ Passing Showers.		
Q	„ Squally.		
R	„ Rain—continuous rain.		
S	„ Snow.		
T	„ Thunder.		

USE OF INSTRUMENTS IN FORETELLING WEATHER.

On Barometer Scales the following contractions may be useful in North Latitude :—

RISE FOR N. Ely. N.W.—N.—E. Dry or Less Wind.	FALL FOR S. Wly. S.E.—S.—W. Wet or More Wind.
Except Wet from N.Eward.	Except Wet from N.Eward.

And the following summary may be useful *generally* :—

RISE FOR Cold, Dry, or Less Wind.	FALL FOR Warm, Wet, or More Wind.
Except Wet from Cold Side.	Except Wet from Cold Side.

In other Latitudes substitute South or Southward for North, &c.

Much inequality of atmospheric pressure or temperature, great depression or elevation of the barometer, sudden or rapid alterations, great falls of rain or snow—indicate more or less change, more or less wind, with its usual accompaniments, either in some places only, or throughout an extensive area of hundreds of miles, if not thousands.

Speaking *generally*, there is far less occasion to give warning of *southerly* storms by signal than of northerly, because those from the southward are preceded by notable signs in the atmosphere, by a falling barometer, and by a temperature higher than usual to the season ; whereas, on the contrary, dangerous storms from a polar quarter (N.W. to N.E.) are sometimes sudden, and usually are preceded by a *rising* barometer, which is often misleading, especially when accompanied by a temporary lull, of perhaps a day or two, with an appearance of fine weather.

THERMOMETER.

Fahrenheit, Réaumur, and the Centigrade Scales.

Zero Fahrenheit corresponds with *minus* 17'78 Centigrade, and *minus* 14'22 Réaumur.

WATER.

1 cubic ft. of water = 62½lb. = 6½ gallons.
1 cubic ft. of sea water = 64lb. = 6½ gallons.
1 imperial gallon = 10lb. = 277 cubic inches.
224 gallons = 20cwt. = 36 cubic feet.
A column of water 12 inches high, 1in. square = 434lb.
A similar column, 1in. diameter = 341lb.
1 cylindrical foot = 4·9 gallons = 49lb.
An inch rainfall = 14½ million gallons per square mile.
Current requires minimum fall 1·10th inch per inch.

IMMERSION IN SALT AND FRESH WATER.

To find the difference of immersion or draught in salt and fresh water. If from salt to fresh, multiply the draught of salt water by 36, and divide the product by 35. If from fresh to salt, multiply the draught of fresh water by 35 and divide the product by 36.

Example :—Required the draught of a vessel in fresh water when drawing 20ft in salt water : $20\text{ft} \times 36 = 720 \div 35\text{ft.} = 20\ 5\frac{4}{7}\text{in.}$

Table of draughts worked out by the above formula :—

Fresh to Salt.		Salt to Fresh.	
Water Mark in Fresh.	Would Draw in Salt.	Water Mark in Salt.	Would Draw in Fresh.
ft.	ft. in.	ft.	ft. in.
24	23 4	24	24 8½
22	21 4½	22	22 7½
20	19 5½	20	20 6½
18	17 6	18	18 6½
16	15 6½	16	16 5½
14	13 7½	14	14 4½
12	11 8	12	12 4½
10	9 8½	10	10 3½
8	7 9½	8	8 2½
6	5 10	6	6 2½

DEPTH OF THE SEA.

	Yards depth.			Yards depth.	
	Average.	Max.		Average.	Max.
Atlantic	4,026	7,750	Irish	240	710
Pacific	4,252	9,310	English Channel....	110	300
Indian	3,658	6,040	German	96	..
Arctic	1,690	5,300	Levant	72	..
Antarctic	3,000	3,950	Adriatic	45	..
Mediterranean	1,476	2,860	Baltic	43	..

The Southern Ocean below Cape Horn reaches a depth of 5,500 yards, and off Cape of Good Hope, 5,700 yards. The average depth of the Bay of Biscay is 1,200 yards.

BEAUFORT NOTATION, FORMULA, AS USED FOR INDICATING THE DISTURBANCE OF THE SEA.

- 0 Calm.

1 Very Smooth.

2 Smooth.

3 Slight.

4 Moderate.
- 5 Rather Rough.

6 Rough.

7 High.

8 Very High.

9 Tremendous

TIME, AT FULL AND CHANGE,

WHEN THE FOLLOWING LIGHTSHIPS SWING FROM FLOOD
TO EBB.

NAME OF LIGHTSHIP.	LAT.		LON.		TIME ¹	OBSERVATIONS.
	°	'	°	'	h. m	
Bahama Bank	54	20	0	N 4	12 0	W 11 45 2nd high water.
Calshot	50	48	40	N 1	16 45	W 10 25 1st high water.
					12 0	2nd high water.
Cardigan Bay	52	24	30	N 5	0 30	W 10 30 "
Carnarvon Bay.....	53	5	40	N 4	44 30	W 10 30 "
Cockle	52	41	20	N 1	46 20	E 10 20 "
Corton	52	31	30	N 1	49 30	E 10 45 [then N.N.E. at 8
Dudgeon	53	15	0	N 0	56 0	E 7 0 Turns Eastward at 7,
East Goodwin	51	13	0	N 1	36 25	E 9 10 Uncertain.
English & Welsh Ground.	51	26	30	N 2	58 0	W 6 56 2nd high water.
Gallopier	51	45	0	N 1	55 50	E 12 0
Gull	51	16	0	N 1	28 25	E 9 13
Hasbro'	52	58	0	N 1	36 0	E 10 30
Helwick	51	31	0	N 4	24 0	W 6 0 2nd high water.
Inner Dowsing	53	19	20	N 0	34 20	E 7 0 Turns Eastwd. at 7, N.E.
						at 9, N.N.W. at 12.
Kentish Knock.....	51	39	30	N 1	41 0	E 11 20 Slack lasts about 20 min.
Leman and Ower.....	53	8	30	N 2	0 20	E 11 0
Lynn Well	53	1	25	N 0	25 10	E 6 20
Morecombe Bay	53	54	0	N 3	31 0	W 10 30 2nd high water.
Nab	50	42	15	N 0	59 25	W 12 0 About.
Newarp	52	45	0	N 1	53 0	E 10 30 [out from Sheerness.
Nore	51	29	0	N 0	48 0	E 12 30 The last 2 hours ebb, see:
North Goodwin.....	51	19	30	N 1	35 20	E 10 13 Uncertain.
Outer Dowsing.....	52	28	15	N 1	2 40	E 8 0 Turns Eastward at 8,
Owers	50	38	35	N 0	41 0	W 10 35 About. [then N. at 9.
Royal Sovereign	50	42	40	N 0	26 50	E 10 45 Swings about 15 mins. be-
Seven Stones.....	50	3	50	N 6	4 30	W 5 0 2nd high water. [fore H.W
Shambles	50	30	50	N 2	20 0	W 10 20 "
Shipwash	52	1	30	N 1	23 0	E 11 10 Slack lasts about 40 mins.
South Sand Head	51	9	12	N 1	28 10	E 9 0 Uncertain.
Spurn	53	34	0	N 0	13 0	E 6 20
Sunk	51	50	40	N 1	30 30	E 11 40 Slack lasts about 40 mins.
Tongue	51	29	0	N 1	19 20	E 12 15
Varne	50	56	10	N 1	16 50	E 8 20 Uncertain.

SPECIFIC GRAVITY OF DIFFERENT SUBSTANCES,
COMPARED WITH WATER.

LIQUIDS, &c.		TIMBER.		METALS.	
Water	100	Cork	24	Zinc	719
Sea Water	103	Poplar	38	Cast-iron	721
Alcohol	84	Fir.....	55	Tin	729
Olive Oil	92	Cedar	61	Bar Iron	779
Turpentine	99	Pear	66	Steel	783
Petroleum	87	Walnut.....	67	Copper	869
Wine.....	100	Cherry	72	Brass	840
Cider	102	Maple	75	Silver	1,051
Beer	102	Apple	79	Lead.....	1,135
Porter	104	Ash	84	Mercury	1,357
Gravel or Sand, abt.	265	Beech	85	Gold	1,926
Granite	272	Mahogany	106	Platina.....	1,950
		Oak	117		
		Ebony	133		

A gallon of wine or water weighs 10lb.

SPHEROIDAL TABLES,

SHOWING THE LENGTH OF EACH DEGREE OF LATITUDE IN STATUTE MILES
AND OF LONGITUDE IN MINUTES OF LATITUDE OR NAUTICAL MILES
UNDER EACH PARALLEL OF LATITUDE.

LATITUDE.							
Length of one Degree in Statute Miles.							
Lat.		Lat.		Lat.		Lat.	
0°	68 701	23°	68 810	46°	69 067	69°	69 318
1°	68 70	24°	68 819	47°	69 079	70°	69 326
2°	68 70	25°	68 818	48°	69 092	71°	69 333
3°	68 70	26°	68 838		104	72°	69 341
4°	68 70	27°	68 848		116	73°	69 348
5°	68 70	28°	68 858		128	74°	69 355
6°	68 71		68 868				69 361
7°	68 71		68 879				69 367
8°	68 71		68 889				69 373
9°	68 72		68 900				69 378
10°	68 72		68 912				69 383
11°	68 72		68 923				69 387
12°			68 934				69 391
13°			68 945				69 395
14°			68 953				69 398
15°			68 970				69 401
16°			68 982				69 403
17°			68 994				69 405
18°			69 006				69 407
19°			69 018				69 408
20°			69 030				69 409
21°			69 042				69 409
22°			69 055				

LONGITUDE.
of one Degree in Nautical Miles.

Lat.		Lat.	
55 550	46°	7	69°
55 125		8	70°
54 684		9	71°
54 225		10	72°
53 751		11	73°
53 250		12	74°

LIGHTHOUSES.

To find the height at which a Light should be put above the sea level to show a given number of miles :—

Multiply the number of miles by itself, and by 4, and divide the product by 7. Thus, a lamp required to show ten miles—

$$10 \times 10 = 100 \times 4 = 400$$

7) —

55½ feet.

Should be 55½ feet high above the sea level.

SCALE FOR VICTUALLING MERCHANT VESSELS AT SEA.

DIETARY SCALE (WITH FRESH BEEF) FOR CREW.

THE VICTUALLING OF SHIPS.

(THOMAS GRAY, ESQ., C.B.)

1. Scurvy has been on the increase in British ships since 1873.
2. Lime-juice, of *itself*, will not prevent scurvy, and too much reliance is placed on it, to the neglect of varied food scales.
3. Lime-juice, in connection with fresh or preserved meat and vegetables, may prevent scurvy.
4. The dietary scale of ships should therefore include a fair proportion of fresh and "preserved" meats, as distinguished from "salted" meats.
5. More fresh vegetables should be carried, notably raw potatoes. No satisfactory reason is given why fresh potatoes cannot be carried on board British ships. The allegation that they will not keep good on board ship is clearly disproved by the fact that they do keep on board United States ships, and will keep for a fair time anywhere else.
6. It is not at present desirable to insert a statutory scale of diet in the articles of agreements with crews serving on long voyages; though it may possibly be necessary hereafter, unless the shipowners themselves move in the matter.

LIST OF PORTS AND PLACES WHERE SHIPS
ARE SWUNG.

Names of Firms at each Port who arrange for Adjustment of Ships' Compasses for Deviation.

ABERDEEN.	Berry & Mackay, Marischall-st., Aberdeen.	In Bay.
BARROW.	F. A. Palmen, The Observatory, Barrow.	In Dock or in Channel.
BELFAST.	F. M. Moore, 102, High-street, Bel'ast. S. D. Neill, Donegal-place, "	Spencer Basin or in Lough.
BRISTOL.	W. Langford & Son, 53, Broad Quay, Bristol. C. W. Price, ", " H. J. Blair, 45, Princes-street, "	In Dock or in King Roads
CARDIFF.	T. L. Ainsley, James-street, Docks, Cardiff. B. Biggs, 64, Bute-street, " H. J. Thatcher, 107, Bute-st., " W. Weichert, Vienna Chambers, Bute-st. ., T. J. Williams, 2, Bute-place, Docks, "	In any Dock available, by permission of Dock Master, or in Penarth Roads.
COWES.	P. Atkey & Son, 29, High-st., West Cowes.	In Solent if under steam, or at private Buoys; fee, 10/6 to Harbour Master.
DUBLIN AND OTHER IR. PORTS.	J. Eshelby, 5, Eden Quay, Dublin. F. M. Moore, 23, " "	Pond, and at Kingston,
GT. YARM'TH.	Mayston & Son, South Quay, Gt. Yarmouth. Day & Hawkins, Broad Quay, "	In Roads.
GRIMSBY.	C. H. Bogen, Hamilton-st., New Clee, G. Grimsby J. F. Lundy, Fish Dock-rd., Grimsby Docks. O. T. Olsen, " "	At Sea or in Roads.

HARTLE- POOLS.	G. Berry & Son, 63, Church-st., W. Hartlepool A. Harris, 3, Church-street, " Emerson, 5, George-street, " G. F. Berry, Northgate, "	In Dock available or at sea.
HUMBER DISTRICT.	B. Cooke & Son, 44, Saville-street, Hull. Castle & Pagan, Commercial-road, " Newton Brothers, Princes Dock, " W. T. Parrott, Albert Dock, "	In River, White Boote Rds., Grimsby Rds., or at sea. Weather or ship's draught renders tug necessary.
LIVERPOOL.	T. Bassnett & Co., 10, Bath-street, Liverpool. J. Bruce & Son, 26, Wapping, " Chadburn & Son, Waterloo-road, " Frodsham & Keen, St. George's-crescent " Graham & Parkes, 43, Canning-place " W. Gerrard, 25, South Castle-street, " D. M'Gregor & Co., 72, "	In River or any Dock avail- able. The outer walls of the Docks were marked about 1868 with the de- grees for vessels adjusting in the River. Allowance now to be made for the difference in variation.
LONDON (THAMES DISTRICT).	Bryer & Son, 104, Minories, London. T. Hemsley & Son, King-st., Tower-hill, " Henry Hughes & Son, 59, Fenchurch-st., " J. Imray & Son, 89, Minories, " Lilley & Son, London-street, " D. M'Gregor & Co., 57, Fenchurch-st., " Norie & Wilson, 156, Minories, " J. D. Potter, King-street, Tower-hill, " James Pyott, 74, W. India Dock-road, " Reynolds & Son, 32, Crutched Friars, " W. H. Rosser, 14, America-square, " F. Wiggins & Sons, 10, King-st., Tower-hill "	At Greenhithe. Three sets of Buoys placed by the Thames Conservancy. No charge for Buoys. Tug usually employed, but not always necessary.
MIDDLESBRO'.	W. Pickering & Co., Docks, Middlesbro'.	In River or at Sea.
NEWPORT.	C. & E. Williams, 56, Dock-st., Newport, Mon.	In Dock or in Newport Rds.
PLYMOUTH.	F. Smith, 48, South-side-street, Plymouth.	In the Sound or in Dock.
SOUTH- AMPTON.	J. B. Thomas, High-street, Southampton. John Grose, 32, Oxford-street, "	In River, at Sea, or any place available.
SUNDERLAND.	C. Hutchinson & Co., Norfolk-st., Sunderland. J. Morton, Savill-place, East, " J. W. Plumb, Bridge-crescent, " J. J. Wilson, 19, Hudson-road, "	Generally at Sea, or in Dock when weather is too heavy
SWANSEA.	B. R. Cousens, 20, Wind-street, Swansea. J. Webber & Son, 104, Oxford-street, "	In any Dock available or in the Bay. No charges in Dock
THE CLYDE DISTRICT.	A. Dobbie & Son, 24, Clyde-place, Glasgow. D. M'Gregor & Co., 37, Clyde-place, " M. Walker & Son, 44, Clyde-place, " Sewill, 126, Broomielaw, " Whyte & Co., 144, Broomielaw, " R. Love, 17, West Blackhall-street, Greenock. D. M'Gregor & Co., 36, Brymner-st., " M. Walker & Son, 32, Cathcart-street " A. Christie, 27, Clyde-place, "	In Gourock Bay or Tail of the Bank. Usually done at Garelochhead, where Buoys are placed by Clyde Trustees. Charge for use of Buoys. Tug usually.
THE FORTH.	Matheson, 47, Shore, Leith. D. Stalker, 6, Commercial-street, "	In Granton Harb'r or Leith Roads. Power on board.
THE TAY.	P. A. Feathers & Son, 43, Dock-st., Dundee.	In any Dk. available. No tug
THE TYNE.	T. L. Ainsley, Mill Dam, South Shields. C. & W. Hutchinson, Corstorphin-etown, " J. Morton, Mill Dam, " Wilson & Gillie, New Quay, North Shields. W. H. Moralee, Union-street, " G. Lowther, Quay, Newcastle-on-Tyne.	At sea off Tyne entrance. Bearings from objects on shore, or by sun.

TABLE,
Showing the dimensions of the Common Links, Weights and Scale
of Proofs for Chain Cables supplied for Her Majesty's Navy.

Diam. of Iron.	COMMON LINKS.		Stay Pins weight not to exceed	Weight of 100 fathoms in 8 lengths, 1 swivel, 8 shackles, not to exceed $\frac{1}{16}$ part.	Weight to be proved to	Which is equal to lbs. per circular $\frac{1}{4}$.
	Mean length 6 diam. of Iron not to exceed $\frac{1}{8}$ of a diam.	Mean width 3 $\frac{1}{2}$ diam. not to ex- ceed $\frac{1}{16}$ of a diam.				
in.	in.	in.	oz.	cwt. qr. lb.	Tons.	lbs.
4 $\frac{1}{2}$	27	16 $\frac{1}{2}$	318 \cdot 937	972 0 0	218 \cdot 7	378 \cdot
4	24	14 $\frac{1}{4}$	224 \cdot	768 0 0	201 \cdot 6	441 \cdot
3 $\frac{1}{2}$	21	12 $\frac{1}{2}$	150 \cdot	588 0 0	176 \cdot 4	504 \cdot
3 $\frac{1}{4}$	19 $\frac{1}{4}$	11 $\frac{1}{2}$	120 \cdot 148	507 0 0	161 \cdot 6	535 \cdot 5
3	18	10 $\frac{1}{2}$	94 \cdot 5	432 0 0	145 \cdot 8	567 \cdot
2 $\frac{3}{4}$	16 $\frac{1}{2}$	9 $\frac{1}{2}$	72 \cdot 789	363 0 0	129 \cdot 3	598 \cdot 5
2 $\frac{1}{2}$	15	9 \cdot 0	54 \cdot 69	300 0 0	112 \cdot	630 \cdot
2 $\frac{1}{4}$	14 $\frac{1}{4}$	8 \cdot 55	47 \cdot 5	270 0 0	101 \cdot	...
2 $\frac{1}{8}$	13 $\frac{1}{8}$	8 \cdot 1	40 \cdot	243 0 0	91 \cdot	...
2 $\frac{1}{16}$	12 $\frac{1}{16}$	7 \cdot 65	33 \cdot 584	216 0 0	81 \cdot	...
2	12	7 \cdot 2	28 \cdot 0	192 0 0	72 \cdot	...
1 $\frac{15}{16}$	11 $\frac{15}{16}$	6 \cdot 75	23 \cdot 0	168 0 0	63 \cdot	...
1 $\frac{14}{16}$	10 $\frac{14}{16}$	6 \cdot 3	18 \cdot 76	147 0 0	55 \cdot	...
1 $\frac{13}{16}$	9 $\frac{13}{16}$	5 \cdot 85	15 \cdot	126 0 0	47 \cdot	...
1 $\frac{12}{16}$	9	5 \cdot 4	11 \cdot 81	108 0 0	40 \cdot	...
1 $\frac{11}{16}$	8 $\frac{11}{16}$	4 \cdot 95	9 \cdot	90 0 0	34 \cdot	...
1 $\frac{10}{16}$	7 $\frac{10}{16}$	4 \cdot 5	6 \cdot 836	75 0 0	28 \cdot	...
1 $\frac{9}{16}$	6 $\frac{9}{16}$	4 \cdot 05	4 \cdot 983	60 3 0	22 $\frac{1}{2}$	...
1 $\frac{8}{16}$	6	3 \cdot 6	3 \cdot 5	48 0 0	18 \cdot	...
1 $\frac{7}{16}$	5 $\frac{7}{16}$	3 \cdot 15	2 \cdot 344	36 3 0	13 $\frac{1}{2}$	...
1 $\frac{6}{16}$	4 $\frac{6}{16}$	2 \cdot 7	1 \cdot 473	27 0 0	10 \cdot	...
1 $\frac{5}{16}$	4 $\frac{5}{16}$	2 \cdot 475	1 \cdot 137	22 2 21	8 $\frac{1}{2}$	...
1 $\frac{4}{16}$	3 $\frac{4}{16}$	2 \cdot 25	\cdot 854	18 3 0	7 \cdot	...
1 $\frac{3}{16}$	3 $\frac{3}{16}$	2 \cdot 025	\cdot 622	15 0 21	5 $\frac{1}{2}$	...
1 $\frac{2}{16}$	3	1 \cdot 8	\cdot 437	12 0 0	4 \cdot	...
1 $\frac{1}{16}$	2 $\frac{1}{16}$	1 \cdot 575	\cdot 293	9 0 21	3 $\frac{1}{2}$	...

ADMIRALTY CRANE CHAIN.

Close linked for Rigging, Cranes, &c., extreme length of link not to
exceed 5 diam., and to be proved by a Proving Machine.

in.	in.	in.
1 $\frac{1}{2}$ diam. 31 $\frac{1}{2}$ tons.	1 $\frac{3}{8}$ diam. 9 $\frac{1}{2}$ tons.	1 $\frac{1}{4}$ diam. 2 $\frac{1}{2}$ tons.
1 $\frac{1}{4}$ " 27 " "	1 $\frac{1}{8}$ " 7 $\frac{1}{2}$ " "	1 $\frac{1}{8}$ " 1 $\frac{1}{2}$ " "
1 $\frac{3}{8}$ " 22 $\frac{1}{2}$ " "	1 $\frac{1}{16}$ " 6 $\frac{1}{2}$ " "	1 $\frac{1}{16}$ " 1 $\frac{1}{8}$ " "
1 $\frac{1}{2}$ " 18 $\frac{1}{2}$ " "	1 $\frac{1}{32}$ " 5 $\frac{1}{2}$ " "	1 $\frac{1}{32}$ " 1 $\frac{1}{16}$ " "
1 $\frac{1}{8}$ " 15 $\frac{1}{2}$ " "	1 $\frac{1}{64}$ " 4 $\frac{1}{2}$ " "	1 $\frac{1}{64}$ " 1 $\frac{1}{32}$ " "
1 " 12 " "	1 $\frac{1}{128}$ " 3 $\frac{1}{2}$ " "	1 $\frac{1}{128}$ " 1 $\frac{1}{64}$ " "
1 $\frac{1}{16}$ " 10 $\frac{1}{2}$ " "	1 $\frac{1}{256}$ " 3 " "	

FORMULA FOR SAFE LOAD ON CHAINS (WORKING
LOAD).

D = Diam. in $\frac{1}{16}$ ths of an inch.
W = Safe Load in tons.

$$D = \sqrt{\frac{8 \cdot W}{8}}$$
$$W = D^2 \cdot \frac{8}{8}$$

Thus in $\frac{3}{4}$ in. Chain, D = 6
Then

$$W = 6^2 \cdot \frac{36}{8} = 4\frac{1}{2} \text{ tons.}$$

$$D = \sqrt{8 \cdot W} \text{ or } \sqrt{8 \cdot 4\frac{1}{2}} = \sqrt{\frac{36}{\frac{1}{16}}} = 4\frac{1}{2} \text{ tons}$$

or $\frac{1}{16}$ ths of an inch.

REMOVAL OF WRECKS.

The "Wrecks Removal Act," 1877, gives powers to the Local Harbour Authority at every port to clear away any wreck forming an obstruction, in default of the owner's proceeding to do so, and to re-imburse itself from the sale of any materials recovered, either of the ship or of its cargo. Where there is no local authority, the lighting and buoying authority is to have jurisdiction, and the same powers of removal, re-imbursing itself in the same manner.

As, however, the expenses of recovery of the materials of an iron ship greatly exceed the value of the materials when recovered, certain of the principal harbour authorities have applied for, and have obtained, further powers, and the Thames and Humber Conservancies, the Mersey Harbour Board, the Clyde Lighthouse Trust, and the Commissioners of Cork and of Waterford Harbours, have, with some others, power to enforce payment by the owners of a wrecked ship of all expenses incurred in the removal of the obstruction.

The "Wrecks Removal Act," 1887, has been amended by the "Wrecks Removal Amendment Act," 1889, which extends the meaning of the word "obstruction" in the former Act.

In France, the measure of liability is now limited to the value of the ship and cargo. By abandonment of these the owner of a vessel wrecked in French waters escapes all further liability to the Government.

STANDING RULES FOR STEAM VESSELS AT SEA.

Officer of the Watch to keep his look-out on the Bridge, not leaving it except when necessary. At night he will be careful to see, from time to time, that the side and masthead lights are burning brightly, and kept trimmed; that the look-out man is at his post, and that the Ship is steered her course. Where an order book is not kept, the course given to be marked on the Log-slate (which should always be kept in the Chart-room), the Officer relieving to examine same before taking charge. The bearing of the North Star to be noted frequently and entered in the Log, with the direction of the Ship's head at the time of observation. Amplitudes never to be neglected. All courses given are by the Bridge or Standard Compass. The Officer in charge of the Deck to observe if any change or difference takes place between any or either of the Compasses, *i.e.*, more than usual, if so, call the Master. Log to be hove every two hours, if Patent Log is towing it should be verified by common Log. Barometer registered every four hours, and to be frequently noted during unsettled weather. Masters and Officers are respectfully requested NEVER to forget the three L's—LATITUDE, LOOK-OUT, and LEAD. No Chart-room ought to be without Celestial Maps hung up.

The Master, when leaving the Deck for rest, shall see that Chart is on the table for the use of the Officer in charge, with instructions to be called on all occasions of doubt.

Pump wells to be sounded by Carpenter at 8 a.m. and at 8 p.m., and to be reported to Chief Officer who reports same to Captain previous to making eight bells; and wells to be sounded not less than once in four hours during bad weather, any unusual quantity of water to be reported to Captain and Engineer of watch. Carpenter to note soundings on the board (where one is kept) in addition to verbal report. Officer of the watch to report changes of weather, particularly so in cases of fog, heavy rains and haze, a large number of Ships, or anything unusual connected with the Ship, such as thick volumes of smoke going right ahead, so that the course may be altered if prudent to do so.

Watch on deck to be kept round the wheel-house, so as to be ready for Officer's orders, and save him from leaving the Bridge to look for the hands.

Master, Officers, and Carpenter to see that all Steering Gear is in working order.

Chief Officer to see that the Forecastle is cleaned out at proper times; also to see the Winches are always in working order.

Carpenter to work all Sluice Valves once a week, and as a rule keep them closed at sea, except when wanted to run water to Engine-room.

Carpenter to look after all Tarpaulins and Wedges for Hatchway Battens, and during fine weather the ventilator covers are to be taken off, and one hatch from each hatchway, and to be closed again before dark. Chief Officer to see that the coal trimmers keep the grating on bunker holes, and put covers on every evening coming in dark; any neglect of this to be reported to the Chief Engineer.

The Ash Shoot is to be used for the purpose of keeping the Ship clean.

GENERAL RULES TO BE OBSERVED ON BOARD SHIP IN PORT OR AT ANCHOR.

The Officer to see that the Anchor Lamp is burning brightly before leaving the deck. Deck never to be left without a look-out.

Chief Officer has general charge, and will see that a proper account of Cargo and Stores is kept both in taking in and discharging, and also see that the Carpenter looks at limbers, and sees that the pumps are all clean and tank cocks in working order, and all scuppers clear in 'tween decks before cargo is stowed there; the Chief Officer to see the Shackles of Chain Cables are in working order (White Lead will be found the best thing for this purpose). Wood Pins (American Elm is good for pins).

Second Officer, and also Third, will be under directions of Chief, either to tally cargo or to look after holds, and, if necessary, to keep a hold book. Ship never to be left without an Officer on board except in Harbour or Dock, and not then until the Watchman takes charge, and Watchman not to leave until one of the Officers comes.

Any suggestions for further information will be appreciated.

JAS. HENDERSON, 45, West Sunnyside, Sunderland,

British Shipmasters' & Officers' Protection Society.

AIDS TO MEMORY, IN RHYME.

By THOMAS GRAY, late Assistant Secretary, Board of Trade.

Two Steamships Meeting. { When all three lights I see ahead,
I port my helm and show my RED.

Two Steamships } GREEN to GREEN or RED to RED—
Passing Clear. } Perfect safety—go ahead !

Two Steamships Crossing.

NOTE.—This is the position of greatest danger; there is nothing for it but good look-out, caution, and judgment, with prompt action.

All ships must keep a good look-out, and steamships must stop and go astern if necessary. If to my Starboard B.P.D. appear

If to my Starboard RED appear,
It is my duty to keep clear—
To act as judgment says is proper—
To Port—or Starboard---Back—or Stop her.
But when upon my Port is seen
A Steamer's Starboard light of GREEN,
There's naught for me to do but see
That GREEN to Port keeps clear of me.

TABLES OF FREEBOARD.

INSTRUCTIONS TO BOARD OF TRADE SURVEYORS.

The Board of Trade have received the report of the Loadline Committee, and the tables and rules annexed thereto.

The Board of Trade accept the conclusions of that Committee as to loadlines as shown in the report and in the tables and rules, and have furnished their officers with copies. Copies can be obtained by the public at large from the agents for the sale of Stationery Office publications, and through any bookseller.

The Board of Trade do not propose that their officers shall detain as overloaded any cargo ship on which the loadline is marked so as to give the freeboard assigned to her by those rules and tables, and which is not loaded beyond the limits prescribed therein.

As proof that the loadline on a ship is marked in accordance with these rules and tables, the Board's staff at the outports will receive the certificate of Lloyd's Register Committee where a loadline has been assigned by that committee, or the certificate of the Board of Trade where a loadline has been assigned by the Board of Trade. In future, the Board of Trade do not intend to assign a loadline for any ship classed in Lloyd's Register Book. In the case of ships not classed, or classed elsewhere, the Board will continue for a time, as heretofore, to assign loadlines on the application of the owner in due course, and accompanied by full particulars of the ship.

The Board of Trade, in making this announcement, desire to point out, for the information of all persons having the command or management of ships, that those rules and tables give minimum freeboards applicable for ships of the highest class only, and that no ships other than ships of the highest class are to be loaded so deeply as those rules and tables admit.

Ships to which a freeboard has been assigned by the Committee of Lloyd's Register, or by the Board of Trade, will, like other ships, be liable to detention, if, having regard to the time of the year, and the voyage, they are loaded more deeply than the rules and tables admit, and ships to which freeboards are not assigned will receive the particular notice of the staff so far as is possible.

Whilst the Board of Trade staff will by this arrangement be greatly relieved of the responsibility for the depth of loading of ships generally, it will be the duty of the Board itself in each case submitted to the Wreck Courts to instruct their solicitor to raise the question of loading whenever it may appear that deep loading may have contributed to the loss of the ship, and it will also be the duty of the Board of Trade if in any such case it should hereafter appear that a ship was loaded more deeply than the tables allow, looking to the age, character, class, and employment of the ship, to make the owner and the person responsible for the loading of the ship a party to the case, and to ask for the opinion of the court on his conduct.

T. H. FARRER, Secretary.

THOMAS GRAY, Assistant Secretary.

Board of Trade, Marine Department, *August, 1885.*

LOADLINE TABLES.

REPORT OF THE LOADLINE COMMITTEE.

[EXTRACT.]

To His Grace the Duke of Richmond and Gordon, K.G., &c.,
President of the Board of Trade.

MY LORD DUKE. The questions put to us were—

"1. Whether it is now practicable to frame any general rules concerning freeboard which will prevent dangerous overloading without unduly interfering with trade.

"2. If so, whether any, and which of the existing tables, with any, and what alterations, or any other, and what tables should be adopted.

"3. How far any such tables can be adopted as fixed rules, and what amount of discretion must be left to the Officers who have to see that they are complied with."

As the result of our prolonged consultations and labours we have unanimously arrived at the following replies to the questions before recited, viz. :—

1. We are of opinion that it is now practicable to frame general rules concerning freeboard which will prevent dangerous overloading without unduly interfering with trade.

2. We have the pleasure to submit herewith tables which we consider should be adopted.

3. We are of opinion that these tables can be adopted, at least for all existing types of cargo vessels, and for some years to come, without the exercise of any other discretion on the part of the officers who have to see that they are complied with, than that which concerns the quality and condition of the ship. The freeboards assigned by the tables herewith are suitable for vessels of the highest class in Lloyd's Register or of strength equivalent thereto, and should be increased for ships of inferior strength.

To the responsible authorities a large discretion must be allowed, viz. : that of applying the tables themselves with reasonable modifications to any very exceptional vessels which may now exist or may hereafter be constructed.

For, careful as we have been to give full consideration to all actual types and sizes of vessels, we cannot but admit that undue interference with trade might occasionally arise were the tables to be applied henceforth to all ships, present and future, without any exception whatever. We are well aware that the discretion which we thus regard as necessary is such as should be exercised with very great skill, care, and judgment, but we see no reason why those charged with the responsible duty of preventing the overloading of merchant ships should not have at their command all needful assistance.

The tables submitted herewith are of the same general form as those hitherto adopted by Lloyd's Register Office, and, like them, involve the reservation above water of a regulated minimum percentage of the total buoyancy. At the same time these tables secure a sufficient height of deck above water to which the Board of Trade advisers have justly attached much importance. The views of the Board of Trade advisers concerning the value of fore-castles, poops, and like deck erections, and the necessity for a liberal amount of freeboard in flush-decked vessels which are

deprived of such erections, have likewise received our careful attention, and have had their due influence upon the tables submitted herewith. The same may be said with reference to the freeboards assigned to vessels of extreme proportions and to vessels of very fine forms. The Board of Trade distinction between winter and summer freeboards has likewise, after the fullest consideration, been adopted.

The tables as now submitted involve only such limited modifications of the freeboards assigned by the latest tables of Lloyd's Register Office as Mr. Benjamin Martell is able to freely accept and cordially concur with. The same may be said of the extension of the tabular forms by the addition thereto of corrections for changes of length and for voyages in summer and in the North Atlantic in winter.

In the tables submitted the definitions of length, breadth, depth, sheer, round of beam, and freeboard have undergone revision.

The changes introduced have been made for the purpose of simplifying the assignment and marking of freeboards, and although they modify in one or two points the directions of the fourth section of the Merchant Shipping Act of 1873, and may therefore render legislation necessary, the measure required would be of so brief, simple, and non-contentious, a character as to render its passage easy.

It will be observed by the tables that they refer exclusively to cargo-carrying vessels. E. J. Reed (Chairman), W. Denny, Robt. Duncan, James Dunn, Frans Elgar, Thomas Gray, William Gray, James Laing, B. Martell, Digby Murray, T. B. Royden, Thos. Sutherland, Reginald Bingham (Secretary).

Explanation of the following Tables of Freeboard for the various Types of Steam and Sailing Vessels.

In the following tables the word Freeboard denotes the height of the side of a ship above the waterline at the middle of her length, measured from the top of the deck at the side, or, in cases where a waterway is fitted, from the curved line of the top of the deck continued through to the side. The freeboards and the corresponding percentages of reserve buoyancy necessary for flush-deck steamers not having spar or awning decks, for awning deck steamers, and for flush-deck sailing vessels, are given in Tables A, C, and D for vessels of these classes and of various dimensions and proportions. The freeboards necessary for spar deck steamers are given in Tables B. The latter are determined by considerations of structural strength, and they denote the limitations to depth of loading which are thereby imposed upon first-class vessels of this type. The freeboards and percentages of reserve buoyancy thus obtained being in excess of what would otherwise be required, the amounts of such percentages are not given in tables B.

The exact freeboard required for a given ship belonging to any of the classes comprised in Tables A, C, and D, may be calculated by constructing a displacement scale to the height of the deck to which the freeboard is measured, so as to give the whole external volume up to the upper surface of that deck. The percentage of the total volume which is given in the tables as the reserve buoyancy for a vessel of given type and dimensions will be the amount of volume that must be left out of the water. If a water-line be drawn upon

the displacement scale aforesaid to cut off the given percentage of total volume, the height of side above this line will be the freeboard required.

In order to simplify and reduce the work that would be involved by the above mode of determining the water-line and the consequent freeboard, that correspond to a given percentage of reserve buoyancy, an approximate method is adopted in the following tables, which enables the freeboard of a vessel to be calculated with a sufficient degree of accuracy for all ordinary working purposes. The use of this method not only saves the time and labour that would be involved by making a complete displacement scale for the whole external volume of a ship, but, what is much more important, it makes the tables easily and directly applicable in cases where such a displacement scale for a vessel is not at hand, or where the data requisite for constructing one is not procurable.

In this approximate method the form of the ship is taken into account by means of proportionate quantities, which are termed coefficients of fineness, instead of by the exact volumes that a displacement scale would give. It is found that the whole internal volume of a ship as measured for register tonnage divided by the product of the length, breadth, and depth, measured as described in the following clauses 1, 2, and 3, gives a fractional quantity or coefficient which bears a nearly constant relation to the quantity that would be obtained by dividing the whole external volume below the upper surface of the deck by the product of the length, breadth, and depth. This fractional quantity is called the "coefficient of fineness" for freeboard purposes; and it serves the same practical object, when combined with the dimensions of the ship in the manner explained in the tables, as the volume itself would do.

In applying such an approximate method as the above, it is necessary to connect the coefficients of fineness given in the tables with a standard sheer and round of beam. The standard scales for sheer and round of beam that have been adopted for this purpose are given in clauses 16 and 17 hereafter. Descriptions are also there given of the corrections that should be made for deviations from these standard amounts.

The freeboards given in the tables are for flush-deck vessels in all cases. Such reductions in freeboard as may be allowed for deck erections of various kinds and sizes in steamers not having spar or awning decks, and in sailing vessels, are described in paragraphs 11, 12, 13, 14, and 15.

No reduction of freeboard should be allowed on account of deck erections in spar-deck and awning-deck steamers.

Tables A and D give the minimum freeboards for first-class iron and steel vessels, the strength of which is at least equal to the requirements of the 100A class in Lloyd's Register for three-deck and smaller vessels. The freeboard of all other iron and steel vessels, classed or unclassed, should be regulated by the same standard; the increase of freeboard required in each case being determined by the limit at which the stress per square inch upon the material of the hull amidships shall not exceed that of the standard class, of the same proportions, form, and moulded depth, when loaded to the freeboards required by Tables A and D. Tables B and C give the freeboards for vessels built in accordance with, or equal to the requirements of Lloyd's Register for the spar and awning deck classes; and are subject to the conditions just stated for any modifications of

strength in excess or diminution of the requirements of their respective classes.

1. *Length.* The length of the vessel is measured on the loadline from the fore side of the stem to the aft side of the stern post in sailing vessels, and to the aft side of the after post in steamers.

2. *Breadth.* The breadth used in obtaining the coefficient of fineness is the extreme breadth measured to the outside of plank or plating as given in the Register Book, or on the certificate of the ship's registry.

3. *Depth of Hold.* The depth used in obtaining the coefficient of fineness is the depth of hold as given in the Register Book, or on the certificate of the ship's registry. This dimension is subject to modification in determining the coefficient of fineness as explained in clause 4.

4. *Coefficient of Fineness.* The coefficient of fineness in one, two, and three deck and spar-deck vessels, is found by dividing 100 times the gross registered tonnage of the vessel below the upper deck by the product of the length, breadth, and depth of hold. In awning-deck vessels the registered depth and tonnage are taken below the main deck.

(a) It is of importance in the application of the rules and tables of freeboard that the coefficient of fineness deduced from the under-deck tonnage, and the principal dimensions should be a correct index to the vessel's relative fulness of form, and that a change in any of those elements which affect the coefficient, determined in accordance with the rule set forth should be considered, and the necessary correction, having regard to the special circumstances of the case, introduced. Among the cases that have from time to time come under notice are the following:—

(b) *Vessel having a cellular bottom throughout, or floors of greater depth than those usually fitted.*—In such a case the coefficient as determined from the under deck tonnage is in most instances slightly greater than it would be if the vessel were framed on the ordinary transverse system with floors of the usual depth. No general rule can be given for guidance, but it is not difficult, if the depth and slope of the top of the cellular bottom or floor be compared on the midship section with the depth and slope of an ordinary floor, to determine very closely the amount of the correction necessary.

(c) *Vessels constructed with floors of the ordinary kind, but with a cellular bottom for a part of the length amidships under the engines and boilers.*—In such a case the registered under-deck tonnage is smaller than it would be if the vessel were framed with ordinary floors throughout, the difference being the tonnage of the space between the top of the cellular bottom in the part amidships, and the level of the ordinary floor. The depth of hold is also measured by the Customs officials to the top of the cellular bottom, and this depth is inserted in the register. Under such circumstances, in order to arrive at the coefficient of fineness the vessel would have, if built on the ordinary system throughout, and for which the tables are framed, the tonnage of the volume between the top of the cellular bottom and the level of the ordinary floor should be calculated and added to the registered under-deck tonnage. The tonnage so corrected, used in conjunction with the depth

of hold to the top of the ordinary floor, gives the coefficient to be used in the tables.

(d) *Vessels constructed with a cellular bottom throughout the fore and after holds, but with floors of the ordinary kind fitted for a part of the length amidships under the engines and boilers.*—

In such a case the tonnage of the space between the top of the ordinary floors in the part amidships, and the top of the cellular bottom, if made continuous, should be estimated, and deducted from the registered under-deck tonnage, and the remainder employed in conjunction with the depth of hold to the top of the cellular bottom in determining the coefficient of fineness.

(e) Other cases may in practice arise in which the registered under-deck tonnage, or the registered depth of hold, or both, require modification before being used in the determination of the coefficient of fineness, but little difficulty will be experienced in making the necessary correction, if it be remembered that the coefficient sought is the coefficient the vessel would have if framed on the ordinary transverse system.

5. *Moulded Depth.*—The moulded depth of an iron or steel vessel, as given in the tables, is the perpendicular depth taken from the top of the upper deck beam at side, at the middle of the length of the vessel, to the top of the keel and the bottom of the frame at the middle line, except in spar and awning deck vessels, in which the depth is measured from the top of the *main* deck beams. In wooden and composite vessels the moulded depth is taken to be the perpendicular depth from the top of the upper deck beam at the side of the vessel amidships to the lower edge of the rabbet of the keel.

(a) The form at the lower part of the midship transverse section of many wooden and composite vessels being of a hollow character, as in cases where thick garboard strakes are fitted, the moulded depth in such instances should be measured from the point where the line of the flat of the bottom continued cuts the keel.

6. *Freeboard.*—The moulded depth, taken as above described, is that used in the tables for ascertaining the amount of reserve buoyancy and corresponding freeboard in vessels having a wood deck, and the freeboard is measured from the top of the wood deck at side, at the middle of the length of the vessel.

(a) On the same principle, in *flush-deck* vessels, other than spar or awning decked, and in vessels fitted with short poop and forecastle, having an iron upper deck, not covered with wood, the usual thickness of a wood deck should be deducted from the moulded depth of the vessel measured as above, and the amount of reserve buoyancy and corresponding freeboard taken from the column in the tables corresponding with this diminished moulded depth: *Example.*—In a steamer fitted with an iron upper deck, not covered with wood, and having a moulded depth of 19ft 10in, 4 inches, or the usual thickness of a wood deck, must be deducted from this, leaving a depth of 19ft 6in. The freeboard of such a vessel with a coefficient of fineness of 0.76, taken from the column under 19ft 6in, is 3ft 8½in, which should be measured from the top of the iron upper deck.

(b) In spar-deck vessels having iron spar decks, and in

awning-deck vessels having iron main decks, the freeboard required by the tables should be measured as if those decks were wood covered. Also in vessels where 7-10ths, or more, of the main deck is covered by substantial erections, the freeboard found from the tables should be measured amidships from a wood deck, whether the deck be of wood or iron. In applying this principle to vessels having shorter lengths of substantial enclosed erections the reduction in freeboard in consideration of its being measured from the iron deck, is to be regulated in proportion to the length of the deck covered by such erections. Thus, in a vessel having erections covering 6-10ths of the length, the reduction is 6-10ths of $3\frac{1}{2}$ inches, or 2 inches.

7. For vessels which trim very much by the stern, through the engines being fitted aft, the freeboard, as ascertained from the tables, if set off amidships would not cut off the amount of surplus buoyancy deemed necessary, and in such cases the suitable freeboard amidships could only be determined after full information is obtained regarding the vessel's trim.

8. The following example will illustrate the *general* application of the tables :—

In a steamer of the following dimensions, viz., length 204ft; breadth extreme, 29ft; depth of hold 16'0ft; registered tonnage under deck, 682 tons; and *moulded* depth, 17'0ft; the under deck capacity in cubic feet is 68,200; by dividing this by 94,656, that is, the product of the length, breadth, and depth of hold, the quotient is 0'72, or the coefficient of fineness.

If we now refer to Table A at 17'0ft moulded depth, and trace the line opposite the coefficient 0'72 to the column corresponding with this depth, it is found that the winter freeboard given for a *first-class steam vessel without erections*, whose length is twelve times the moulded depth, is 2ft 11in, corresponding with a reserve buoyancy of 25 per cent. of the total bulk.

9. *Vessels of Extreme Proportions*.—For vessels whose length is greater or less than that of the vessel of the same moulded depth for which the tables are framed, the freeboard should be increased or diminished as specified in the footnote to the tables. Thus, if the vessel in the example, clause 8, were 224ft long, the winter freeboard required would be 2ft 11in plus 2in, or 3ft 1in. For steam vessels with top-gallant forecastles, having long poops or raised quarter decks connected with bridge-houses, the whole extending over 6-10ths, or more, of the length of the vessel, the correction for length should be one-half that specified in Tables A.

10. *Breadth and Depth*.—In framing the tables it has been assumed that the relation between the breadth and depth is such as to ensure safety at sea with the freeboard assigned when the vessel is laden with homogeneous cargo; for vessels of less relative breadth, the freeboard should be so increased as to provide a sufficient range of stability, or other means adopted to secure the same.

11. *Erections on Deck*.—For steam vessels with top-gallant forecastles having long poops, or raised quarter decks connected with bridge-houses, covering in the engine and boiler openings, the latter being entered from the top, and having an efficiently constructed iron bulkhead at the fore end, a deduction may be made

from the reserve buoyancy given in the tables, according to the following scale:—

(a) When the combined length of the poop, or raised quarter-deck, bridge-house, and top-gallant forecastle is—
9-10ths of the length of the vessel, deduct 85 per cent. of the reduction in the reserve buoyancy allowed for a complete awning deck, or 85-100ths, of the difference between freeboards in Tables A (after correction for sheer) and Tables C.

8-10ths of the length of the vessel, deduct 75 per cent. of the reduction in the reserve buoyancy allowed for a complete awning deck, or 75-100ths of the difference between freeboards in Tables A (after correction for sheer) and Tables C.

7-10ths of the length of the vessel, deduct 63 per cent. of the reduction in the reserve buoyancy allowed for a complete awning deck, or 63-100ths of the difference between freeboards in Tables A (after correction for sheer) and Tables C.

6-10ths of the length of the vessel, deduct 50 per cent. of the reduction in the reserve buoyancy allowed for a complete awning deck, or 50-100ths of the difference between freeboards in Tables A (after correction for sheer) and Tables C.

When the engine and boiler openings are protected only by a long raised quarter-deck, a less reduction in freeboard will be allowed.

(b) For intermediate lengths of erections the amount of the reduction in freeboard should be ascertained by interpolation.

(c) The above scale of allowance is prepared for vessels having long poops or raised quarter-decks 4ft high or above. For raised quarter-decks of less height, extending over four-tenths of the length, and forming an integral portion of the vessel, the amount of the allowance should be diminished, as shown in the following table:—

Height of raised Quarterdeck.	Moulded depth of Vessel in Feet.						
	ft. 10	ft. 12	ft. 14	ft. 16	ft. 18	ft. 20	ft. 22
ft. in.	ins.	ins.	ins.	ins.	ins.	ins.	ins.
3 6.....	—	—	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{4}$
3 0.....	$\frac{1}{2}$	$\frac{2}{3}$	1	1	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$
2 6.....	1	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2	2 $\frac{1}{2}$	3
2 0.....	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	—	—	—
1 6.....	2	2 $\frac{1}{2}$	3	—	—	—	—

(a) For shorter lengths of raised quarter-deck a proportionate increase should be made.

(c) It is to be understood in the application of this scale of allowance for erections on deck to vessels with long poops or with raised quarter-decks, and bridge-houses combined, that the deduction is a maximum deduction, applicable only to vessels of these types in which the erections are of a most substantial character, the deck openings most effectually protected, and the crew are either berthed in the bridge-house, or the arrangements to enable them to get backwards and forwards from their quarters are of a satisfactory character. For other

vessels of the same class the amount of the deduction should be fixed only after a careful survey. Also such vessels when employed in the Atlantic trade will require to have specially provided greater freeboard than that given in the tables.

(f) A sufficient number of clearing ports as large as practicable, and with shutters properly hung, should be formed in the bulwarks of these vessels, between the forecastle and the bridge-house, for the purpose of speedily clearing this part of the deck of water.

12. When the erections on a vessel consist of a topgallant fore-castle, a short poop having an efficient bulkhead, and bridge-house disconnected, the latter in steamers covering the engine and boiler openings, and being efficiently enclosed with an iron bulkhead at each end, a deduction may be made from the reserve buoyancy given in the tables according to the following scale :—

(a) When the combined length of the erections is—

5-10ths of the length of the vessel, deduct 40 per cent. of the reduction in reserve buoyancy allowed for a complete awning deck or 2-5ths of the difference between the freeboard in Tables A (after correction for sheer and length) and Tables C (after correction for length).

4-10ths of the length of the vessel, deduct 33 per cent. of the reduction in reserve buoyancy allowed for a complete awning deck or 1-3rd of the difference between the freeboards in Tables A (after correction for sheer and length) and Tables C (after correction for length).

13. When the erections on a vessel consist of a topgallant fore-castle and bridge-house only, the latter in steamers covering the engine and boiler openings, and being efficiently enclosed with an iron bulkhead at each end, a deduction may be made from the reserve buoyancy given in the tables according to the following scale :—

(a) When the combined length of the erections is—

4-10ths of the length of the vessel, deduct 30 per cent. of the reduction in reserve buoyancy allowed for a complete awning deck or 3-10ths of the difference between the freeboards in Tables A (after correction for sheer and length) and Tables C (after correction for length).

3-10ths of the length of the vessel, deduct 25 per cent. of the reduction in reserve buoyancy allowed for a complete awning deck or 1-4th of the difference between the freeboards in Tables A (after correction for sheer and length) and Tables C (after correction for length).

14. When the erections on a vessel consist of a short poop and topgallant fore-castle only, the former enclosed at the fore-end with an efficient bulkhead, the deduction from the reserve buoyancy given in the tables should be according to the following scale :—

(a) When the combined length of the erections is—

3-8ths of the length of the vessel, deduct 8 per cent. of the reserve buoyancy or 10 per cent. of the freeboard required for the vessel flush decked (after correction for length).

3-8ths of the length of the vessel, deduct 6 per cent. of the reserve buoyancy or 8 per cent. of the freeboard required for the vessel flush decked (after correction for length) ;

and so on in proportion.

15. When a vessel is fitted with a topgallant fore-castle only,

the reduction in reserve buoyancy should be one-half that prescribed by the previous paragraph for the case where, in addition to the forecastle, the vessel is fitted with a poop of the same length.

16. *Sheer*.—The tables are framed for vessels having a mean sheer of deck *measured at the side, as shown in the following table.*

	Length over which Sheer is measured.						
	100	150	200	250	300	350	400
	Mean Sheer in Inches over the Length specified.						
<i>Flush-deck Vessels</i> .—Sheer to be measured abreast stem and sternpost.	20	25	30	35	40	45	50
<i>Vessels having short poops and forecastles</i> .—Sheer to be measured at points distant $\frac{1}{4}$ th the length of the vessel from each end.	14	18	22	26	30	34	38
<i>Vessels having short forecastles only</i> .—Sheer to be measured abreast the sternpost and at a point distant $\frac{1}{4}$ th the length from the stem.	14 $\frac{1}{2}$	18 $\frac{1}{2}$	23	27	31	35 $\frac{1}{2}$	40

(a) In flush-deck vessels and in vessels to which clauses 11 and 12 apply, when the sheer of deck is greater or less than the above, *and is of a gradual character*, divide the difference in inches between it and the mean sheer provided for by 4, and the result in inches is the amount by which the freeboard amidships should be diminished or increased according as the sheer is greater or less.

(b) In vessels having short poops and forecastles, and in those having short forecastles only, the freeboard should be corrected in respect of the excess of or deficiency in reserve buoyancy due to variations in sheer from the standard amount over the length uncovered by substantial erections, as provided in the above table. One-fourth the difference between the mean sheer specified and that measured as described, is approximately the amount by which the freeboard should be modified in respect of sheer.

(c) The divisor 4 is to be used when the sheer is *of a gradual character*, and is not strictly applicable either to those cases in which the sheer is suddenly increased at the bow or stern, or to those in which it does not maintain its normal rate of increase to the ends of the vessel.

(d) In all cases the rise in sheer forward and aft is measured with reference to the deck at the middle of the length, and where the lowest point of the sheer is abaft the middle of the length, one-half of the difference between the sheer amidships and the lowest point, should be added to the freeboard specified in the tables for flush-deck vessels, and for vessels having short poops and forecastles only.

(e) Where, as in some instances, vessels fitted with long poops or raised quarter-decks connected with bridge-houses have the deck line rising rapidly from amidships to the front of the bridge, and from that point onwards gradually approaching

the normal sheer line, the freeboard may be slightly modified in consideration of the increase of height of deck in the "well."

(f) In flush-deck vessels and in vessels having short poops and forecastles the excess of sheer for which an allowance is made shall not exceed one-half the total standard mean sheer for the size of the ship.

(g) No decrease should be made in the freeboard of spar and awning deck vessels, in respect of excess of sheer.

17. *Round of beam.*—In calculating the reserve of buoyancy, an allowance has been made of one quarter of an inch for every foot of the length of the midship beam for the round up. When the round of the beam in flush-decked vessels is greater or less than that given by this rule, divide the difference in inches by 2, and diminish or increase the freeboard by this amount. For vessels with erections on deck the amount of the allowance should depend on the extent of the main deck uncovered. This rule for round of beam does not apply to spar or awning deck vessels.

18. As a general illustration of the way in which the tables should be used in modifying the freeboard on account of erections on deck, extreme proportions and variations in sheer, the following may be taken as an example :

A vessel is 234ft long, 29ft broad, and has a moulded depth of 17'0ft, the coefficient of fineness being .72. Suppose the vessel to have a poop and bridge-house of the united length of 121ft, and a forecastle 20ft in length, and let the sheer forward, measured at the side, be 4ft 6in, and aft 2ft 1in.

	Ft.	in.
Freeboard by Tables A if of the normal length, without erections, and with the normal amount of sheer.....	2	11
The mean sheer by rule is 33'4in, or 6in less than that in the vessel, and the reduction in freeboard is 6in divided by 4	0	1½
Freeboard of vessel without erections and with 39½in mean sheer	2	9½
Freeboard by Tables C as awning-decked.....	1	4½
Difference.....	1	5

The combined length of the erections is $\frac{1}{3}\frac{1}{3}\frac{1}{3}$ ths or $\frac{6}{10}$ ths of the length of the vessel, and the allowance for erections under clause 11 will be therefore $\frac{6}{10}$ ths of 17in, or 8½in.

	Deduct in.
We have therefore :	
Amount deducted from freeboard for excess of sheer.....	1½
Amount deducted from the freeboard for erections	8½
Amount deducted if vessel be fitted with an uncovered iron main deck (clause 6) = 6-10 × 3½	2
	12
The length being 30ft in excess of that for which the tables are framed, the addition to the freeboard in respect of the same is one-half of 30-20ths of 2in, or	1½
	10½

That is 10½in to be deducted from 2ft 11in, leaving a winter freeboard of 2ft 0½in.

Corresponding summer freeboard 1ft 10½in.

TABLE A.—CARGO-CARRYING STEAM VESSELS NOT HAVING SPAR OR AWNING DECKS.

For allowances admitted in vessels having erections on deck, see "Explanation."

The reduction in freeboard for summer voyages from European and Mediterranean Ports is to be made from April to September inclusive. In other parts of the world the reduced freeboard should be used during the corresponding or recognised summer months. The additional freeboard specified for the North Atlantic trades is to apply to vessels sailing to or from the Mediterranean or any British or European Port, and which may sail to or from, or call at Ports in British North America or Eastern Ports in the United States, north of and including Baltimore, from October to March, inclusive. Double the reduction to be allowed for voyages in the fine season in the Indian seas, between the limits of Suez and Singapore.

Table of Reserve Buoyancy and Freeboard for First-class Sea-going Iron and Steel Steam Vessels (in Salt Water).

Percentage Reserve Buoyancy—(Winter).																					
22'0	22'2	22'4	22'6	22'8	23'0	23'2	23'4	23'6	23'8	24'0	24'2	24'4	24'6	24'8	25'0	25'2	25'4	25'6	25'8	26'0	
Corresponding Height of Freeboard Amidships (Winter), Measured from Top of Deck at Side.																					
Moulded Depth and Length.																					
ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	0
120	0	10	6	11	0	11	6	12	0	12	6	13	0	13	6	14	0	14	6	15	

TABLE A.—(Continued.)

Coefficient of Fineness.	Percentage Reserve Buoyancy—(Winter).						
	33'2	33'5	33'8	34'1	34'4	34'7	35'0
	Corresponding Height of Freeboard Amidships (Winter), Measured from Top of Deck at Side.						
	Moulded Depth and Length.						
	ft. in. 31 0	ft. in. 31 6	ft. in. 32 0	ft. in. 32 6	ft. in. 33 0	ft. in. 33 6	ft. in. 34 0
	ft. 372	ft. 378	ft. 384	ft. 390	ft. 396	ft. 402	ft. 408
'68	ft. in. 7 9	ft. in. 8 0	ft. in. 8 2½	ft. in. 8 5	ft. in. 8 7½	ft. in. 8 10½	ft. in. 9 1
'70	7 10½	8 1½	8 4	8 6½	8 9	9 0	9 2½
'72	7 11½	8 2½	8 5	8 7½	8 10	9 1	9 3½
'74	8 0½	8 3½	8 6	8 9	8 11½	9 2½	9 5
'76	8 1½	8 4½	8 7	8 10	9 0½	9 3½	9 6
'78	8 3	8 6	8 8½	8 11½	9 2	9 5	9 7½
'80	8 4	8 7	8 9½	9 0½	9 3	9 6	9 8½
'82	8 5	8 8	8 10½	9 1½	9 4	9 7	9 10
A	1'6	1'6	1'6	1'6	1'6	1'7	1'7
B	5	5	5	5½	5½	5½	6
C	5½	5½	5½	6	6	6	6

A. Correction in inches for a change of 10 ft in the length.
B. Deduction in inches for summer voyages.
C. Addition in inches for winter, North Atlantic.

19. Vessels loaded in fresh water may have less freeboard than that given in the several tables according to the following scale :

Moulded Depth in Feet.			Reduction in Freeboard.	
			Vessels Without Erections on Deck.	Spar and Awning-Deck Vessels.
			in.	in.
9 and under 11			—	—
11 " 13			2½	—
13 " 16			3	3½
16 " 19			3½	4
19 " 22			4	4½
22 " 25			4½	5
25 " 28			5	5½
28 " 31			5½	6
31 " 34			6	6½

MEMO.—The weight of a cubic foot of salt water is taken in the above table to be 65 lb., and that of fresh water 62½ lb.
For weight of waters see p. 32.

TABLE B.—CARGO-CARRYING SPAR-DECK VESSELS.

These Tables apply to spar-deck vessels in which the height at side between the main and spar decks is 7 ft. from top of beam to top of beam; when this height is greater or less than 7 ft., the freeboard to the spar deck will require modification.

Table of Freeboard to Spar Deck for First-class Sea-going Spar-deck Steam Vessels (in Salt Water).

Coefficient of Fineness.		Moulded Depth (to Main Deck) and Length.															
		20 ft.								30 ft.							
		ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
.68	.....	10 0	16 6	17 0	17 6	18 0	18 6	19 0	19 6	20 0	20 6	21 0	21 6	22 0	22 6	23 0	23 6
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
.70	.....	11 1	17 6	18 0	18 6	19 0	19 6	20 0	20 6	21 0	21 6	22 0	22 6	23 0	23 6	24 0	24 6
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
.72	.....	12 2	18 6	19 0	19 6	20 0	20 6	21 0	21 6	22 0	22 6	23 0	23 6	24 0	24 6	25 0	25 6
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
.74	.....	13 3	19 6	20 0	20 6	21 0	21 6	22 0	22 6	23 0	23 6	24 0	24 6	25 0	25 6	26 0	26 6
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
.76	.....	14 4	20 6	21 0	21 6	22 0	22 6	23 0	23 6	24 0	24 6	25 0	25 6	26 0	26 6	27 0	27 6
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
.78	.....	15 5	21 6	22 0	22 6	23 0	23 6	24 0	24 6	25 0	25 6	26 0	26 6	27 0	27 6	28 0	28 6
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
.80	.....	16 6	22 6	23 0	23 6	24 0	24 6	25 0	25 6	26 0	26 6	27 0	27 6	28 0	28 6	29 0	29 6
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
.82	.....	17 7	23 6	24 0	24 6	25 0	25 6	26 0	26 6	27 0	27 6	28 0	28 6	29 0	29 6	30 0	30 6
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
A.....		1'0	1'0	1'0	1'0	1'0	1'0	1'1	1'1	1'1	1'1	1'1	1'1	1'2	1'2	1'2	1'2
B.....		2 1	3	3	3	3	3	3 1	3 1	3 1	3 1	4	4	4 1	4 1	4 1	4 1
C.....		3 1	4	4	4	4	4	4 1	4 1	4 1	4 1	5	5	5	5	5	5

A. Correction in inches for a change of 20 ft. in the length.

C. Addition in inches for winter North Atlantic.

B. Deduction in inches for summer voyages.

TABLE B—(Continued.)

Height of Freeboard Amidships (Winter), Measured from Top of Spar Deck at Side.

Coefficient of Fineness.	Moulded Depth (to Main Deck) and Length.															
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
	366	377	378	384	390	396	402	408	414	420	426	432	438	444		
'68	8 2	8 4½	8 7	8 9½	9 0	9 2½	9 5½	9 8	9 11	10 2	10 5	10 8½	10 11½	11 3		
'70	8 3	8 5½	8 8	8 10½	9 1	9 3½	9 6½	9 9	10 0	10 3	10 6	10 9½	11 0½	11 4		
'72	8 3½	8 6	8 8½	8 11	9 2	9 4½	9 7½	9 10	10 1	10 4	10 7	10 10½	11 1½	11 5		
'74	8 4½	8 7	8 9½	9 0	9 3	9 5½	9 8½	9 11	10 2	10 5	10 8	10 11½	11 2½	11 6		
'76	8 5	8 7½	8 10	9 0½	9 3½	9 6	9 9	10 0	10 3	10 5	10 9	11 0½	11 3½	11 7		
'78	8 5½	8 8	8 11	9 1½	9 4½	9 7	9 10	10 1	10 4	10 7	10 10	11 1½	11 4½	11 8		
'80	8 6	8 8½	8 11½	9 2	9 5	9 7½	9 10½	10 1½	10 4½	10 7½	10 10½	11 2	11 5½	11 9		
'82	8 7	8 9½	9 0½	9 3	9 6	9 8½	9 11½	10 2½	10 5½	10 8½	10 11½	11 3	11 6½	11 10		
A	1'2	1'3	1'3	1'3	1'3	1'3	1'4	1'4	1'4	1'4	1'5	1'5	1'5	1'5		
B	5	5	5	5½	5½	5½	5½	6	6	6	6	6½	6½	6½		
C	5½	5½	5½	5½	5½	6	6	6	6	6	6	6½	6½	6½		

A. Correction in inches for a change of 10 ft. in the length.

C. Addition in inches for winter, North Atlantic.

B. Deduction in inches for summer voyages.

TABLE C.—(Continued.)

A. Correction in inches for a change of 10 ft. in the length		C. Addition in inches for winter, North Atlantic.		B. Deduction in inches for summer voyages.	
100	10	10	10	10	10
110	11	11	11	11	11
120	12	12	12	12	12
130	13	13	13	13	13
140	14	14	14	14	14
150	15	15	15	15	15
160	16	16	16	16	16
170	17	17	17	17	17
180	18	18	18	18	18
190	19	19	19	19	19
200	20	20	20	20	20
210	21	21	21	21	21
220	22	22	22	22	22
230	23	23	23	23	23
240	24	24	24	24	24
250	25	25	25	25	25
260	26	26	26	26	26
270	27	27	27	27	27
280	28	28	28	28	28
290	29	29	29	29	29
300	30	30	30	30	30
310	31	31	31	31	31
320	32	32	32	32	32
330	33	33	33	33	33
340	34	34	34	34	34
350	35	35	35	35	35
360	36	36	36	36	36
370	37	37	37	37	37
380	38	38	38	38	38
390	39	39	39	39	39
400	40	40	40	40	40
410	41	41	41	41	41
420	42	42	42	42	42
430	43	43	43	43	43
440	44	44	44	44	44
450	45	45	45	45	45
460	46	46	46	46	46
470	47	47	47	47	47
480	48	48	48	48	48
490	49	49	49	49	49
500	50	50	50	50	50
510	51	51	51	51	51
520	52	52	52	52	52
530	53	53	53	53	53
540	54	54	54	54	54
550	55	55	55	55	55
560	56	56	56	56	56
570	57	57	57	57	57
580	58	58	58	58	58
590	59	59	59	59	59
600	60	60	60	60	60
610	61	61	61	61	61
620	62	62	62	62	62
630	63	63	63	63	63
640	64	64	64	64	64
650	65	65	65	65	65
660	66	66	66	66	66
670	67	67	67	67	67
680	68	68	68	68	68
690	69	69	69	69	69
700	70	70	70	70	70
710	71	71	71	71	71
720	72	72	72	72	72
730	73	73	73	73	73
740	74	74	74	74	74
750	75	75	75	75	75
760	76	76	76	76	76
770	77	77	77	77	77
780	78	78	78	78	78
790	79	79	79	79	79
800	80	80	80	80	80
810	81	81	81	81	81
820	82	82	82	82	82
830	83	83	83	83	83
840	84	84	84	84	84
850	85	85	85	85	85
860	86	86	86	86	86
870	87	87	87	87	87
880	88	88	88	88	88
890	89	89	89	89	89
900	90	90	90	90	90
910	91	91	91	91	91
920	92	92	92	92	92
930	93	93	93	93	93
940	94	94	94	94	94
950	95	95	95	95	95
960	96	96	96	96	96
970	97	97	97	97	97
980	98	98	98	98	98
990	99	99	99	99	99
1000	100	100	100	100	100

TABLE D.—SAILING VESSELS.
Table of Reserve Buoyancy and Freeboard for First-class Sea-going Iron and Steel Sailing Vessels and Composite and Wood Vessels of the Highest Class (in Salt Water).

Coefficient of Fineness		Percentage Reserve Buoyancy (Iron Vessels).																				
		23.5	23.7	23.9	24.2	24.4	24.6	24.9	25.1	25.3	25.5	25.7	26.0	26.2	26.4	26.6	26.8	27.1	27.3			
		Corresponding Height of Freeboard Amidships, measured from Top of Deck at Side.																				
		Moulded Depth and Length.																				
Wood.	Composite.	Iron.	ft. 100		ft. 105		ft. 110		ft. 115		ft. 120		ft. 125		ft. 130		ft. 135		ft. 140			
			ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
"	"	"	1	5 1/2	1	6 1/2	1	7 1/2	1	8 1/2	1	9 1/2	1	10 1/2	1	11 1/2	1	12 1/2	1	13 1/2	1	14 1/2
			1	5 1/2	1	6 1/2	1	7 1/2	1	8 1/2	1	9 1/2	1	10 1/2	1	11 1/2	1	12 1/2	1	13 1/2	1	14 1/2
			1	6	1	7	1	8	1	9	1	10	1	11	1	12	1	13	1	14	1	15
			1	6	1	7	1	8	1	9	1	10	1	11	1	12	1	13	1	14	1	15
			1	6 1/2	1	7 1/2	1	8 1/2	1	9 1/2	1	10 1/2	1	11 1/2	1	12 1/2	1	13 1/2	1	14 1/2	1	15 1/2
64	66	68	1	6 1/2	1	7 1/2	1	8 1/2	1	9 1/2	1	10 1/2	1	11 1/2	1	12 1/2	1	13 1/2	1	14 1/2		
66	68	70	1	6 1/2	1	7 1/2	1	8 1/2	1	9 1/2	1	10 1/2	1	11 1/2	1	12 1/2	1	13 1/2	1	14 1/2		
68	70	72	1	6 1/2	1	7 1/2	1	8 1/2	1	9 1/2	1	10 1/2	1	11 1/2	1	12 1/2	1	13 1/2	1	14 1/2		
70	72	74	1	6 1/2	1	7 1/2	1	8 1/2	1	9 1/2	1	10 1/2	1	11 1/2	1	12 1/2	1	13 1/2	1	14 1/2		
72	74	76	1	6 1/2	1	7 1/2	1	8 1/2	1	9 1/2	1	10 1/2	1	11 1/2	1	12 1/2	1	13 1/2	1	14 1/2		
A	...	...	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
B	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

A. Correction in inches for a change of 10 ft. in the length. B. Deduction in inches for summer voyages. C. Addition in inches for winter, North Atlantic.

TABLE D.—(Continued.)

Table of Reserve Buoyancy and Freeboard for First-class Sea-going Iron and Steel Sailing Vessels (in Salt Water).

PRODUCTION OF OPEN-HEARTH STEEL INGOTS.

UNITED KINGDOM.

[From the Annual Report of the British Iron Trade Association.]

Year.	Tons.	Year.	Tons.
1868	520	1879	175,000
1869	3,950	1880	251,000
1870	11,150	1881	338,000
1871	27,000	1882	436,000
1872	42,000	1883	455,000
1873	77,000	1884	475,250
1874	90,500	1885	583,918
1875	88,000	1886	694,150
1876	123,000	1887	981,104
1877	137,000	1888	1,290,742
1878	175,500		

RELIGIOUS DENOMINATIONS

AMONG ENGLISH-SPEAKING COMMUNITIES OF THE WORLD.

Episcopalians	21,305,000	Congregationalists	5,750,000
Methodists	16,000,000	Unitarians	900,000
Roman Catholics	14,600,000	Free Thought	1,250,000
Presbyterians	10,650,000	Minor sects	2,500,000
Baptists	8,195,000	Of no particular religion	10,000,000

SUPPLEMENTARY REPORT OF THE NON-OFFICIAL MEMBERS OF THE LOADLINE COMMITTEE.

[EXTRACT.]

If a compulsory loadline should be resolved upon, it will be necessary to apply the same limitations to vessels under foreign flags as to our own vessels when loading in this country or in the Colonies of Great Britain. We allude to this, which would seem indeed to be an obvious necessity, because it has been brought before us in evidence that foreign vessels are frequently grave offenders in respect to over loading. It will be for your Grace's consideration whether it may be possible to establish an understanding with the leading maritime powers on this subject, but at all events it will, in our opinion, be impossible to enforce compulsory loadlines on the merchant ships of this country without at the same time requiring their application in British and colonial ports to ships under other flags competing with them.

It will be essential, if a compulsory loadline is to be enforced, to constitute a public authority competent to administer such a measure in a manner that will command the fullest confidence. It has been carefully pointed out in the report of the Committee that the tables which are now submitted must be applied with "very great skill, care, and judgment." It will therefore be necessary to secure some system of administration capable of giving due and well-considered effect to the principles embodied in these tables, not only by a just application of such principles to the many and various types of ships which at present exist, but also by their adaption to future changes and development which are certain to ensue from the progress of naval architecture.

In our judgment, it would only tend to failure to entrust the task which we describe to any purely official administration, however excellent. The duty of assigning compulsory loadlines, if it is to be undertaken, must, we consider, be entrusted to some body of a more representative character, which should consist not only of officials, but also of gentlemen who as shipowners, naval architects, seamen, and perhaps underwriters would bring to bear on this work great knowledge and experience, and who, by reason of that knowledge and experience, and also of their high standing in their several professions, would ensure such a fulfilment of the duty confided to them as would command the confidence of the country. We do not intend to imply that the authority or council which we suggest should be independent of the Minister responsible to Parliament. E. J. Reed, F. Elgar, B. Martell, W. Denny, W. Gray, T. B. Royden, R. Duncan, J. Laing, T. Sutherland, J. Dunn.

ANTIQUITY OF THE MARINER'S COMPASS.

The earliest mention of the Compass in Europe is in the work of Guigit de Povins, a French Poet, written in 1180, and quoted by Claude Fauchet in his "*Recueil de l'origine de la langue et poesie Francois.*"

"Par le virtue de la manete
Ou'il fers volenter se joint,
Quant il nuis est tenebre et brune,
Con ne voit estoile ne lune,
Parce sont il mariner ceinte,
De la droit voit tenir."

Which would appear to dispose of the claim of the Venetians—that it was introduced from China by their countryman, Marco Polo, A.D. 1260, and the claims of the Neapolitans, who assert that it was discovered by John de Gioga, of Amalfi, about the year 1302.

RELATIVE PRICES OF COALS.

The Ton of 20 cwt.—The Imperial Chaldron of 25½ cwt.—The Newcastle Chaldron of 33 cwt.

QUANTITIES OF COALS, CINDERS, AND PATENT FUEL EXPORTED
FROM THE UNITED KINGDOM TO FOREIGN COUNTRIES AND
BRITISH SETTLEMENTS ABROAD IN 1887, 1888, AND 1889.

	1887 Tons.	1888 Tons.	1889 Tons.
Total	24,460,967	26,968,462	28,956,445

COAL OUTPUT
UNITED KINGDOM.

Year.	No. of Collieries.	Total of the United Kingdom.	Year.	No. of Collieries.	Total of the United Kingdom.
1871	2,760	117,264,028	1884	3,554	160,757,779
1872	3,001	123,492,316	1885	3,488	159,351,418
1873	3,527	127,011,747	1887	3,382	162,119,812
1875	3,933	131,867,105	1888	3,354	169,935,219
1877	4,112	134,610,000	1889	3,389	176,916,724
1880	3,904	146,818,522			

OUTPUT OF PIG-IRON
UNITED KINGDOM.
[1830 TO 1889.]

Year.	Production.	Year	Production.	Year.	Production.
	Tons.		Tons.		Tons.
1830	677,417	1871	6,627,179	1883	8,490,224
1839	1,248,781	1872	6,741,929	1884	7,575,604
1843	1,215,353	1873	6,566,451	1885	7,297,295
1847	1,999,608	1874	5,991,408	1886	6,870,665
1852	2,701,000	1875	6,365,462	1887	7,441,927
1854	3,069,838	1879	6,009,434	1888	7,898,634
1865	4,819,254	1880	7,721,833	1889	8,245,336
1870	5,963,515				

PRODUCTION OF STEEL RAILS.
UNITED KINGDOM.
[BESSEMER.]

Year.	In United Kingdom.	On West Coast.	Percentage of Production on West Coast.	Quantity Exported.
	Tons.	Tons.		Tons.
1878	633,733	..	..	439,392
1879	519,718	177,839	34	463,878
1880	739,910	230,507	31	693,696
1881	1,023,740	256,636	25	820,800
1882	1,235,785	291,999	24	936,949
1883	1,097,174	298,447	27	971,165
1884	784,968	261,489	33	527,460
1885	706,583	198,022	29	484,255
1886	730,343	273,338	37	512,903
1887	1,021,847	446,363	43.69	760,180
1888	979,083	469,717	47	713,781
1889	943,048	495,104	..	757,935

ANNUAL INCREASE SINCE 1878 IN THE USE OF STEEL FOR
STEAMERS AND SAILING VESSELS BUILT UNDER LLOYD'S
SURVEY.

APPROXIMATE WEIGHT OF MATERIAL.

Year.	Steel.		Iron.	
	Steam.	Sailing.	Steam.	Sailing.
	Tons.	Tons.	Tons.	Tons.
1878	2,682	..	243,717	66,897
1879	..	..	78,411	25,603
1880	21,895	1,002	268,433	24,009
1881	41,019	1,900	354,301	41,190
1882	69,269	7,486	403,644	67,711
1883	84,931	8,515	445,375	68,818
1884	65,386	8,016	274,189	78,011
1885	92,549	18,431	89,104	96,020
1886	96,583	18,352	49,320	58,627
1887	195,907	14,433	24,052	28,150
1888	1,209,361		109,526	
1889	1,215,276		72,975	

ELEVATION OF CONTINENTS.

AVERAGE HEIGHT ABOVE SEA LEVEL.

	Feet.		Feet.
Europe.....	670	North America	1,150
Asia	1,140	South America	1,100

THE GULF STREAM

is equal to a river 50 miles wide, 1,000 feet deep, current four miles an hour, with a temperature of 65° Fahrenheit, cooling down to 40° as it gets north.

MOUNTAINS.

HEIGHT ABOVE THE SEA LEVEL.

	Feet.		Feet.		Feet.
Ararat.....	17,266	Gibraltar	1,432	Pic Blanc	10,205
Ben Nevis.....	4,358	Hindoo Koosh ..	20,800	Puy-Dome.....	4,750
Bighorn	14,430	Illimani	24,450	St. Bernard	11,006
Chimborazo	21,440	Kaa-Mowna	18,400	Sinai	7,500
Cotopaxi	19,600	Lebanon.....	9,520	Snowdon	3,571
Dawalagiri	26,862	Mont Blanc	15,781	Sorata.....	25,250
Egmont	11,433	Olympus	6,500	Teneriffe.....	12,036
Everest	29,002	Orizaba	17,371	Vesuvius	3,978

HIGHEST LATITUDES ATTAINED BY ARCTIC EXPLORERS.

Year.	Explorers.	N. Latitude.
1607—	Hudson	80d 23m 00s
1773—	Phipps (Lord Musgrove)	80d 48m 00s
1806—	Scoresby	81d 12m 42s
1827—	Parry	82d 45m 30s
1874—	Meyer (on land)	82d 09m 00s
1875—	Markham (Nares' expedition)	83d 20m 26s
1876—	Payer	83d 07m 00s
1884—	Lockwood (Greely's party)	83d 24m 00s

A SHIP'S BELLS.

TIME, A.M.		TIME, P.M.	
1 Bell	12.30	1 Bell	12.30
2 Bells	1.0	2 Bells	1.0
3 "	1.30	3 "	1.30
4 "	2.0	4 "	2.0
5 "	2.30	5 "	2.30
6 "	3.0	6 "	3.0
7 "	3.30	7 "	3.30
8 "	4.0	8 " (1st dog watch)	4.0
1 Bell	4.30	1 Bell	4.30
2 Bells	5.0	2 Bells	5.0
3 "	5.30	3 "	5.30
4 "	6.0	4 " (2nd dog watch)	6.0
5 "	6.30	1 "	6.30
6 "	7.0	2 "	7.0
7 "	7.30	3 "	7.30
8 "	8.0	4 "	8.0
1 Bell	8.30	1 Bell	8.30
2 Bells	9.0	2 Bells	9.0
3 "	9.30	3 "	9.30
4 "	10.0	4 "	10.0
5 "	10.30	5 "	10.30
6 "	11.0	6 "	11.0
7 "	11.30	7 "	11.30
8 "	Noon	8 "	Midnight

One Sailing Knot, 6,174 ft. One Statute Mile, 5,280 ft. (5-6 knot).
A sailor's day commences at 12 noon.

TABLES OF DISTANCES.

NORTH SEA, ENGLISH AND ST. GEORGE'S CHANNELS, ETC.

SUNDERLAND to	M.	SUNDERLAND to	M.	GLASGOW to	M.
Hartlepool.....	16	(South about)		Londonderry	143
Whitby	37	Swansea	690	Sligo	249
Flambro' Head	68	Cardiff	720	Limerick	430
Hull	126	Queenstown	720	Dublin	197
Yarmouth, Norfolk ...	180	Dublin	776	Milford.....	292
London	310	Limerick	887	Cork	347
Dungeness	300	LONDON to		Swansea	346
Beachy Head.....	332	Hull	233	Liverpool	222
St. Catherine (I.W.) .	393	Middlesborough	295	Cardiff	375
Portland	440	Shields	315	Falmouth	435
Plymouth	513	Leith	418	Plymouth ..	468
Falmouth	545	Dundee	420	Southampton	582
Hamburg	413	Aberdeen	433	London	765
Nieu Diep	252	Sheerness	43	Leith, by Channel ...	1063
Amsterdam Canal	258	Dover.....	87		
Rotterdam Canal	266	Southampton	214	LEITH to	
Antwerp	327	Plymouth	317	Alloa	23
Ostende	279	Cardiff	526	Dundee	48
Havre	378	Liverpool.....	660	Aberdeen	85
Brest outside Ushant	627	Glasgow by Channel..	766	Inverness.....	210
Bordeaux.....	896	Amsterdam Canal.....	188	Wick.....	185
Bilbao Bar	915	Havre	198	Berwick	52
Oporto	1120	LIVERPOOL to		Newcastle	115
Lisbon	1295	Holyhead.....	68	Hartlepool	128
Cadiz	1516	Douglas.....	70	Middlesborough	138
Huelva	1496	Dublin	120	Hull	235
Leith.....	114	Cork.....	254	Lynn	266
Aberdeen.....	137	Dundalk	135	Yarmouth	291
Lerwick	314	Belfast	140	Ipswich	348
North Cape	1230	Londonderry	217	Dover	386
Archangel.....	1877	Barrow	46	Southampton	506
Hammerfest	1205	Whitehaven	73	Falmouth	646
Drontheim	695	Stranraer.....	146	Hamburg.....	489
Christiansund.....	590	Ardrossan	170	Stettin	782
Bergen, N. Channel....	431	Milford	188	Rotterdam Canal	370
SUNDERLAND to		Swansea	237	Amsterdam Canal.....	353
(North about)		Cardiff	266	Ostende	386
Greenock.....	639	Bristol	285	Antwerp	445
Troon	608	Falmouth	322		
Ardrossan	610	Plymouth	352	HULL to	
Belfast	602	Southampton	470	Christiania	558
Dublin.....	690	GLASGOW to		Hamburg	387
Liverpool.....	720	Ardrossan	45	Rotterdam Canal	195
Cardiff.....	880	Campbelton	74	Amsterdam Canal.....	198
Limerick	808	Stranraer	87	Ostende	205
		Belfast	116	Antwerp	263

SLEEVE, CATTEGAT, BELTS, BALTIC, GULFS OF FINLAND
AND BOTHNIA.

SUNDERLAND OF		SUNDERLAND OF		SUNDERLAND OF	
SHIELDS to	M.	SHIELDS to	M.	SHIELDS to	M.
Naze of Norway	330	Skaw	435	Copenhagen	586
Christiansand.....	365	Gothenburg	480	Malmo	592
Arendahl	400	Elsinore	563	Kiel.....	664
Christiania	520	Landscrona	576	Travemunde	689

SUNDERLAND or SHIELDS to	M.	LEITH to	M.	HULL to	M.
Wismar	690	Skaw	465	Uleaborg	1458
Rostock	684	Göteborg	510	Haparanda	1450
Stralsund	656	Elsinore	593	LIVERPOOL to	
Stockholm	998	Landskrona	606	(North about)	
Hernösand	1190	Copenhagen	616	Naze of Norway	810
Karlskrona	738	Malmö	622	Christiansand	845
Norkøping	958	Kiel	694	Arendahl	880
Bornholm N. end	683	Travemünde	719	Christiania	1000
Swinemünde	712	Wismar	720	Skaw	915
Dantzic	860	Rostock	714	Göteborg	960
Pillau	862	Stralsund	686	Elsinore	1043
Memel	893	Stockholm	1028	Landskrona	1056
Libau	903	Hernösand	1220	Copenhagen	1066
Windau	923	Karlskrona	768	Malmö	1072
Riga	1053	Norkøping	988	Kiel	1144
Dagerort	1003	Bornholm N. end	713	Travemünde	1169
Port Baltic	1076	Swinemünde	742	Wismar	1170
Revel	1104	Dantzic	890	Rostock	1164
Narva	1209	Pillau	892	Stralsund	1136
Helsingfors	1120	Memel	923	Stockholm	1478
Wyborg	1234	Libau	933	Hernösand	1670
Cronstadt	1254	Windau	963	Karlskrona	1218
Gefle	1113	Riga	1083	Norkøping	1438
Vasa	1245	Dagerort	1033	Bornholm N. end	1163
Uleaborg	1423	Port Baltic	1106	Swinemünde	1192
Haparanda	1415	Revel	1134	Dantzic	1340
LONDON to		Narva	1230	Pillau	1342
Naze of Norway	486	Helsingfors	1150	Memel	1373
Christiansand	511	Wyborg	1264	Libau	1383
Arendahl	542	Cronstadt	1284	Windau	1413
Christiania	656	Gefle	1143	Riga	1533
Skaw	564	Vasa	1275	Dagerort	1483
Göteborg	609	Uleaborg	1453	Port Baltic	1556
Elsinore	692	Haparanda	1445	Revel	1584
Landskrona	705	HULL to		Narva	1689
Copenhagen	715	Naze of Norway	365	Helsingfors	1600
Malmö	721	Christiansand	400	Wyborg	1714
Kiel	793	Arendahl	435	Cronstadt	1734
Travemünde	818	Christiania	555	Gefle	1593
Wismar	819	Skaw	470	Vasa	1725
Rostock	813	Göteborg	515	Uleaborg	1903
Stralsund	786	Elsinore	598	Haparanda	1895
Stockholm	1127	Landskrona	611	GLASGOW to	
Hernösand	1319	Copenhagen	621	(North about)	
Karlskrona	867	Malmö	627	Naze of Norway	740
Norkøping	1087	Kiel	699	Christiansand	775
Bornholm N. end	812	Travemünde	721	Arendahl	810
Swinemünde	841	Wismar	725	Christiania	930
Dantzic	989	Rostock	719	Skaw	845
Pillau	991	Stralsund	691	Göteborg	850
Memel	1022	Stockholm	1033	Elsinore	973
Libau	1022	Hernösand	1225	Landskrona	986
Windau	1062	Karlskrona	773	Copenhagen	996
Riga	1182	Norkøping	993	Malmö	1002
Dagerort	1132	Bornholm N. end	718	Kiel	1074
Port Baltic	1205	Swinemünde	747	Travemünde	1099
Revel	1233	Dantzic	895	Wismar	1100
Narva	1338	Pillau	897	Rostock	1094
Helsingfors	1249	Memel	928	Stralsund	1066
Wyborg	1363	Libau	938	Stockholm	1408
Cronstadt	1383	Windau	968	Hernösand	1600
Gefle	1242	Riga	1088	Karlskrona	1148
Vasa	1374	Dagerort	1038	Norkøping	1368
Uleaborg	1550	Port Baltic	1111	Bornholm N. end	1093
Haparanda	1544	Revel	1139	Swinemünde	1122
LEITH to		Narva	1244	Dantzic	1270
Naze of Norway	360	Helsingfors	1155	Pillau	1272
Christiansand	395	Wyborg	1269	Memel	1303
Arendahl	430	Cronstadt	1289	Libau	1313
Christiania	550	Gefle	1148	Windau	1343
		Vasa	1280	Riga	1453

MEDITERRANEAN, ADRIATIC, BLACK SEA, AND SEA OF AZOV.

SUNDERLAND to	M.	SUNDERLAND to	M.	LONDON to	M.
Alexandria	3382	Venice	3264	Tunis	2105
Algiers	2020	Zante	2914	Vigo	810
Alicante.....	1918	LONDON to		Valencia.....	1740
Almeria	1748	Alexandria	3102	Venice	2980
Athens	2990	Algiers	1740	Zante	2634
Barcelona	2153	Alicante.....	1638	LIVERPOOL to	
Batoum	3950	Almeria	1468	Alexandria	3027
Bona	2245	Athens	2710	Algiers	1665
Carthageria	1845	Barcelona	1873	Alicante.....	1563
Constantinople...	3370	Batoum	3670	Almeria	1393
Corfu	2865	Bona	1965	Athens	2635
Denia.....	1978	Carthageria.....	1565	Barcelona	1798
Genoa	2499	Constantinople.....	3090	Batoum	3595
Gibraltar	1615	Corfu	2585	Bona	1890
Kertch	3790	Denia	1698	Carthageria	1490
Leghorn.....	2450	Genoa	2219	Constantinople.....	3015
Lisbon	1338	Gibraltar	1325	Corfu	2510
Malaga	1650	Kertch	3510	Denia	1623
Malta	2595	Leghorn.....	2170	Genoa	2144
Marseilles	2330	Lisbon	1058	Gibraltar	1250
Messina.....	2720	Malaga	1370	Kertch	3435
Naples	2540	Malta	2315	Leghorn.....	2095
Odessa	3690	Marseilles	2050	Lisbon	973
Oran	1820	Messina	2440	Malaga	1295
Palermo	2562	Naples	2260	Malta	2240
Patras	2915	Odessa	3410	Marseilles	1975
Port Said	3645	Oran	1540	Messina	2365
Sfax.....	2620	Palermo.....	2282	Naples	2185
Smyrna	3225	Patras	2635	Odessa	3335
Sulina.....	3620	Port Said	3365	Oran.....	1465
Taganrog	3960	Sfax	2900	Palermo.....	2207
Tarragona	2120	Smyrna	2945	Patras	2560
Trieste	3264	Sulina.....	3340	Port Said	3290
Tunis	2385	Taganrog	3680	Sfax	2825
Vigo	1090	Tarragona	1840	Smyrna	2870
Valencia	2040	Trieste	2984	Sulina.....	3265

TABLES OF DISTANCES.

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LIVERPOOL to	M.	GLASGOW to	M.	CARDIFF to	M.
Taganrog	3605	Tunis	2140	Venice	2800
Tarragona.....	1765	Vigo	845	Zante	2454
Trieste	2909	Valencia.....	1775	ANTWERP to	
Tunis	2030	Venice	3015	Alexandria	3152
Vigo	735	Zante	2669	Algiers	1790
Valencia	1665	CARDIFF to		Alicante.....	1688
Venice	2905	Alexandria	2922	Almeria	1518
Zante	2560	Algiers	1562	Athens	2760
GLASGOW to		Alicante	1458	Barcelona	1923
Alexandria	3137	Almeria	1288	Batoum	3720
Algiers	1775	Athens	2530	Bona...	2015
Alicante...	1673	Barcelona	1693	Carthageria	1615
Almeria	1503	Batoum.....	3490	Constantinople.....	3140
Athens	2745	Bona	1785	Corfu	2635
Barcelona	1908	Carthageria	1385	Denia	1748
Batoum	3705	Constantinople	2910	Genoa	2269
Bona	2000	Corfu	2405	Gibraltar	1375
Carthageria	1600	Denia.....	1518	Kertch	3560
Constantinople.....	3125	Genoa	2039	Leghorn.....	2220
Corfu	2620	Gibraltar	1145	Lisbon	1108
Denia	1733	Kertch	3330	Malaga	1420
Genoa	2254	Leghorn.....	1990	Malta.....	2365
Gibraltar ..	1360	Lisbon	878	Marseilles	2100
Kertch	3545	Malaga	1190	Messina...	2490
Leghorn	2205	Malta.....	2135	Naples	2310
Lisbon	1093	Marseilles.....	1870	Odessa	3460
Malaga	1405	Messina.....	2260	Oran	1590
Malta	2350	Naples	2080	Palermo.....	2132
Marseilles	2185	Odessa	3230	Patras	2685
Messina.....	2475	Oran	1360	Port Said	3415
Naples	2295	Palermo.....	2102	Sfax	2950
Odessa	3445	Patras.....	2455	Smyrna	2995
Oran	1575	Port Said	3182	Sulina.....	3390
Palermo.....	2317	Sfax	2720	Taganrog	3730
Patras	2670	Smyrna	2765	Tarragona.....	1890
Port Said	3400	Sulina...	3160	Trieste	3034
Sfax	2935	Taganrog	3500	Tunis	2155
Smyrna ..	2980	Tarragona	1660	Vigo	860
Sulina.....	3375	Trieste ..	2804	Valencia	1790
Taganrog	3715	Tunis	1925	Venice	3030
Tarragona.....	1875	Vigo	630	Zante	2684
Trieste	3019	Valencia	1560		

RED SEA, INDIA, CHINA, JAPAN, ETC.

[By the Suez Canal.]

SUNDERLAND to	M.	SUNDERLAND to	M.	LONDON to	M.
Acheen Head	7980	Suez	3660	Manilla	9650
Aden	4975	Zanzibar	6575	Mauritius	7005
Akyab	8230	Yokohama	11525	Nieu Chwang	11165
Amherst.....	8290	Nagasaki.....	11055	Penang	7930
Amoy	10300	Osaka	11365	Rangoon	8025
Anjer	8550	Hakodadi	11815	Shanghai	10540
Batavia	8615	LONDON to		Singapore	8345
Bombay.....	6610	Acheen Head	7700	Suez	3380
Bushire	6741	Aden	4695	Zanzibar	6295
Calcutta.....	8330	Akyab	7950	Yokohama	11245
Cochin	6815	Amherst.....	8005	Nagasaki	10775
Colombo	7075	Amoy	10015	Osaka	11085
Foochoofoo	10520	Anjer.....	8270	Hakodadi	11535
Galle	7095	Batavia	8330	LIVERPOOL to	
Hong Kong	10060	Bombay	6330	Acheen Head.....	7625
Kurrachee	6390	Bushire	6460	Aden	4620
Madras	7620	Calcutta.....	7950	Akyab	7875
Manilla	9930	Cochin	6535	Amherst.....	7930
Mauritius	7285	Colombo	6795	Amoy	9940
Nieu Chwang	11445	Foochoofoo.....	10240	Anjer	8195
Penang	8210	Galle	6815	Batavia	8255
Rangoon.....	8305	Hong Kong	9780	Bombay.....	6255
Shanghai	10820	Kurrachee.....	6110	Bushire	6385
Singapore	8625	Madras	7340	Calcutta ..	7675

LIVERPOOL to	M.	GLASGOW to	M.	CARDIFF to	M.
Cochin	6460	Manilla	9685	Suez	3200
Colombo	6720	Mauritius	7040	Zanzibar	6615
Foochoofoo.....	10165	Nieu Chwang	11200	Yokohama	11065
Galle	6740	Penang	7965	Nagasaki.....	10595
Hong Kong	9705	Rangoon	8060	Osaka	10905
Kurrachee.....	6035	Shanghai	10575	Hakodadi	11355
Madras	7265	Singapore	8380	ANTWERP to	
Manilla	9575	Suez	3415	Acheen Head	7750
Mauritius	6930	Zanzibar	6330	Aden	4745
Nieu Chwang.....	11090	Yokohama	11280	Akyab	8000
Penang	7855	Nagasaki.....	10819	Amherst.....	8055
Rangoon	7955	Osaka	11120	Amoy	10065
Shanghai	10465	Hakodadi	11570	Anjer	8320
Singapore	8270	CARDIFF to		Batavia	8380
Suez	3305	Acheen Head	7520	Bombay.....	6380
Zanzibar	6220	Aden	4515	Bushire	6510
Yokohama	11170	Akyab	7770	Calcutta.....	8000
Nagasaki.....	10700	Amherst.....	7825	Cochin	6585
Osaka	11010	Amoy.....	9835	Colombo	6845
Hakodadi	11460	Anjer	8090	Foochoofoo.....	10290
GLASGOW to		Batavia	8150	Galle	6865
Acheen Head	7735	Bombay	6150	Hong Kong	9830
Aden	4730	Bushire	6280	Kurrachee.....	6160
Akyab	7985	Calcutta	7770	Madras	7390
Amherst	8040	Cochin	6355	Manilla	9700
Amoy	10050	Colombo	6615	Mauritius	7055
Anjer	8305	Foochoofoo..	10060	Nieu Chwang ...	11215
Batavia	8365	Galle	6635	Penang	7980
Bombay	6365	Hong Kong	9600	Rangoon	8075
Bushire	6495	Kurrachee.....	5930	Shanghai.....	10500
Calcutta.....	7985	Madras	7160	Singapore	8395
Cochin	6570	Manilla	9470	Suez	3430
Colombo	6830	Mauritius	6825	Zanzibar	6345
Foochoofoo	10275	Nieu Chwang	10985	Yokohama	11295
Galle	6850	Penang	7750	Nagasaki	11825
Hong Kong	9815	Rangoon	7845	Osaka	11135
Kurrachee.....	6145	Shanghai	10360	Hakodadi	11585
Madras	7375	Singapore	8165		

ATLANTIC, WEST INDIES, BRAZILS, CAPE OF
GOOD HOPE, EAST AND WEST COAST SOUTH AMERICA,
AUSTRALIA, ETC.

SUNDERLAND to	M.	SUNDERLAND to	M.	LONDON to	M.
Acapulco	12350	Halifax, N.S.	2965	Algoa Bay	6340
Adelaide	9025	Havana	4470	Antigua.....	3830
Algoa Bay.....	6620	Hobart Town.....	11560	Arica	9735
Antigua	4110	Honolulu.....	13610	Ascension	3905
Arica	10015	Jamaica	4490	Auckland, N.Z.....	12120
Ascension	4185	Melbourne ..	11530	Azores	1460
Auckland, N.Z.....	12400	Monte Video	6450	Bahia	4505
Azores	1740	Natal	7090	Barbadoes.....	3805
Bahia	4785	New Orleans	4970	Belize.....	4570
Barbadoes.....	4085	New York.....	3525	Bermuda	3055
Belize.....	4850	Otago	12450	Bonny	4170
Bermuda	3335	Panama	11630	Boston, U.S.A	3030
Bonny	4450	Pernambuco.....	4410	Buenos Ayres	6280
Boston, U.S.A.	3310	Quebec	3210	Caldera	9210
Buenos Ayres	6560	Rio Janeiro	5480	Callao.....	9970
Caldera	9490	Rio Grande	6050	Cape Coast Castle ...	3870
Callao	10250	San Francisco	13950	Cape of Good Hope	6065
Cape Coast Castle ...	4150	Sierra Leone	3280	Cape Horn	7400
Cape of Good Hope	6345	St. John's, N.F.	2485	Chagres	4990
Cape Horn.....	7680	St. Vincent (Atlan).	2805	Cobija	9490
Chagres.....	5270	Sydney.....	11120	Coquimbo	9040
Cobija	9770	Valparaiso ..	9050	Demerara	4030
Coquimbo	9320	Wellington, N.Z. ...	12150	Fiji Islands.....	11720
Demerara	4310	LONDON to		Guayaquil	10670
Fiji Islands....	12000	Acapulco.....	12070	Halifax, N.S. ..	2685
Guayaquil	10950	Adelaide	8745	Havana.....	4190

TABLES OF DISTANCES.

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LONDON to	M.	LIVERPOOL to	M.	CARDIFF to	M.
Hobart Town.....	11280	St. Vincent (Atlan.)	2450	Bonny	4040
Honolulu.....	13330	Sydney, N.S.W.	10765	Boston, U.S.A.....	2900
Jamaica	4210	Valparaiso.....	8795	Buenos Ayres	6100
Melbourne	11250	Wellington, N.Z.	11795	Caldera	9030
Monte Video	6170			Callao	9790
Natal	6810	GLASGOW to		Cape of Good Hope	5885
New Orleans	4690	Acapulco.....	12105	Cape Horn	7220
New York.....	3245	Adelaide	8780	Coquimbo	8860
Otago.....	12170	Algoa Bay	6375	Demerara	3850
Panama	11350	Antigua	3865	Halifax, N.S.	2505
Pernambuco	4130	Arica	9770	Havana	4010
Quebec	2930	Ascension	3940	Jamaica	4030
Rio Janeiro	5200	Auckland, N.Z.....	12155	Melbourne	11070
Rio Grande	5870	Azores	1495	Monte Video.....	5990
San Francisco	13670	Bahia	4540	Natal	6630
Sierra Leone	3000	Barbadoes.....	3040	New Orleans	4510
St. John's, N.F.	2205	Belize.....	4605	New York.....	3065
St. Vincent (Atlan.)	2525	Bermuda	3090	Panama	11170
Sydney	10840	Bonny	4205	Pernambuco	3950
Valparaiso.....	8870	Boston, U.S.A.	3065	Quebec	2750
Wellington, N.Z.	11870	Buenos Ayres	6315	Rio Janeiro	5020
		Caldera	9245	San Francisco	13490
LIVERPOOL to		Callao	10005	St. John's, N.F.	2075
Acapulco.....	11995	Cape Coast Castle ...	3905	St. Vincent (Atlan.)	2345
Adelaide	8670	Cape of Good Hope	6900	Sydney, N.S.W.	10660
Algoa Bay	6265	Cape Horn	7435	Valparaiso.....	8690
Antigua	3755	Chagres.....	5025	Wellington, N.Z.	11690
Arica	9660	Cobija	9525		
Ascension	3830	Coquimbo.....	9075	ANTWERP to	
Auckland, N.Z.....	12045	Demerara	4065	Acapulco	12170
Azores	1385	Fiji Islands.....	11755	Adelaide	8845
Bahia.....	4430	Guayaquil	10705	Algoa Bay	6440
Barbadoes.....	3730	Halifax, N.S.	2720	Antigua.....	3930
Belize.....	4495	Havana	4225	Arica	9835
Bermuda	2980	Hobart Town.....	11315	Ascension	4005
Bonny	4095	Honolulu.....	13365	Auckland, N.Z.	12220
Boston, U.S.A.	2955	Jamaica.....	4245	Azores.....	1560
Buenos Ayres	6205	Melbourne	11285	Bahia	4605
Caldera	9135	Monte Video	6205	Barbadoes	3905
Callao	9895	Natal	6845	Bermuda	3155
Cape Coast Castle ...	3795	New Orleans	4725	Bonny.....	4270
Cape of Good Hope	5995	New York	3280	Boston, U.S.A.....	3130
Cape Horn	7325	Otago	12205	Buenos Ayres	6330
Chagres	4915	Panama	11385	Caldera	9260
Cobija	9415	Pernambuco.....	4165	Callao	10020
Coquimbo	8965	Quebec	2965	Cape of Good Hope	6115
Demerara	3955	Rio Janeiro	5235	Cape Horn	7450
Fiji Islands.....	11645	Rio Grande	5905	Coquimbo	9090
Guayaquil	10595	San Francisco	13705	Demerara	4080
Halifax, N.S.....	2610	Sierra Leone.....	3035	Halifax, N.S.	2735
Havana	4115	St. John's, N.F.	2240	Havana	4240
Hobart Town	11205	St. Vincent (Atlan.)	2560	Jamaica.....	4160
Honolulu	13255	Sydney, N.S.W.	10875	Melbourne	11300
Jamaica.....	4135	Valparaiso.....	8905	Monte Video	6220
Melbourne	11175	Wellington, N.Z.	11905	Natal	6860
Monte Video	6095			New Orleans	4740
Natal	6735	CARDIFF to		New York.....	3295
New Orleans	4615	Acapulco... ..	11940	Panama	11400
New York.....	3170	Adelaide	8615	Pernambuco	4180
Otago	12095	Algoa Bay.....	6210	Quebec	2989
Panama	11275	Antigua	3700	Rio Janeiro	5250
Pernambuco.....	4055	Arica	9605	San Francisco	13720
Quebec	2855	Ascension	3775	St. John's, N.F.	2255
Rio Janeiro	5125	Auckland, N.Z.....	11960	St. Vincent (Atlan.)	2575
Rio Grande	5795	Azores	1330	Sydney.....	10895
San Francisco	13595	Bahia	4375	Valparaiso.....	8920
Sierra Leone	2925	Barbadoes.....	3675	Wellington, N.Z.	11920
St. John's, N.F.	2130	Bermuda	2925		

THE SUEZ CANAL.

The Suez Canal was projected by Mons. Ferdinand de Lesseps in 1852. It was opposed by Lord Palmerston, but approved of by the French, Austrian, Russian, Turkish, and Egyptian Governments. The cutting was commenced in 1858, and the first vessel passed from the Mediterranean to the Red Sea on August 15, 1865, and though the first ship of any considerable tonnage which passed through the canal was the *Primo* (on February 17, 1867), French and English vessels entered in November, 1868; and in 1869 the course was declared suitable for the mail steamers. The official opening took place in November, 1869.

In July, 1872, the Canal Company levied their dues on the gross tonnage of ships, and the British Government demanded an International Conference, which met at Constantinople in November and December, 1873, and accepted certain proposals of the Porte, against which M. de Lesseps in vain protested, and after attempting the closing of the Canal for four days in April, 1874, he gave way.

There are 400,000 shares in this undertaking, and in 1875 the British Government bought from the then Khedive of Egypt 176,602, or nearly one half of the whole. A premium of $12\frac{1}{2}$ per cent. was paid for these, the price being £3,976,000, though the actual cost was £4,076,565, a large commission having been paid to Messrs. Rothschild. The present capital of the Suez Canal Company is £16,867,000, £8,000,000 in shares and the rest in debentures. Dividends, which were only 5 per cent. in 1874, $5\frac{1}{2}$ per cent. in 1876, and 6 per cent. in 1879, have advanced up to 17 per cent. in 1883.

The proportions of Canal against Cape voyages are about as 104 to 60. An average of 76 per cent. of the tolls are from British vessels, $9\frac{1}{2}$ per cent. from French, 4 per cent. from Dutch, and $10\frac{1}{2}$ per cent. of all other nations.

One-seventh of our foreign commerce now passes through the Canal, which was 13 years in construction, is 87 miles long and 26 feet deep, and has shortened by one-third all voyages to the East. The British Government, in May and June, 1877, claimed for the Canal international neutrality. In October, 1887, a Convention agreeing to the neutralisation of the Canal was signed at Paris by the representatives of Great Britain and France. The Canal was opened to night traffic (over part of its length only) in the year 1886 to steamers equipped with the electric light, by which the duration of transit was considerably lessened, vessels making the passage in about 20 hours as compared with the average ordinary passage of 36 hours. On March 1, 1887, the entire length of the Canal was thrown open to night traffic, and ships availing themselves of this permission now pass through the Canal with comparative ease in 16 hours.

TRAFFIC OF THE CANAL.

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TRAFFIC OF THE CANAL.

Year.	No. of Ships.	Net Tonnage.	Year.	No. of Ships.	Net Tonnage.
1870	486	436,609	1880.....	2,026	3,057,421
1871.....	765	761,467	1881.....	2,727	4,136,779
1872.....	1,082	1,160,743	1882.....	3,198	5,074,808
1873.....	1,173	1,367,767	1883.....	3,307	5,775,861
1874.....	1,264	1,631,650	1884.....	3,284	5,871,500
1875.....	1,494	2,009,984	1885.....	3,624	6,335,752
1876.....	1,452	2,096,771	1886.....	3,100	5,767,655
1877.....	1,663	2,355,447	1887.....	3,137	5,903,024
1878.....	1,593	2,269,678	1888.....	3,440	6,640,834
1879.....	1,477	2,263,332	1889.....	3,425	6,783,187

No. of Passengers who passed through the Canal in each of the following years.		Classification of Passengers.	In 1888.	In 1889.
1875.....	84,446	Soldiers—		
1880.....	101,551	Chinese	—	—
1881.....	90,524	German	999	740
1882.....	131,068	English	30,602	29,583
1883.....	119,177	Spanish	1,671	731
1884.....	151,916	French	21,026	18,489
1885.....	205,951	Dutch	2,228	2,218
1886.....	171,411	Italian	19,650	13,416
1887.....	182,997	Japanese		
1888.....	183,895	Turkish	9,134	7,629
1889.....	180,594	Portuguese	234	—
		Russian	1,587	4,681
		Austrian	—	40
		Civil	63,103	72,192
		Pilgrims—		
		Turkish		
		Others	29,231	27,868
		Total in vessels	179,465	175,506
		„ in barques	4,430	5,087
		Total	183,895	180,594

The vessels passing through the Canal for the years 1888 and 1889 were as follow

	1888	1889	Nationality.	1888	1889
Steamers	2,540	2,565	British	2,625	2,611
Mail steamers	643	645	French	187	158
Steamers in ballast	17	11	German	163	194
Transports.....	159	107	Dutch	121	146
Gunboats	18	15	Austro-Hungarian ..	58	54
Despatch boats	22	19	Italian	146	103
Corvettes and Cruisers	22	30	Norwegian	39	48
Ironclads	3	3	Spanish	26	33
Yachts	4	6	Russian	16	23
Torpedo boats.....	3	10	American.....	1	5
Steam frigates	3	1	Turkish	29	22
Tugboats	3	10	Portuguese	7	1
Sailing vessels	1	1	Japanese	3	3
Tanks.....	2	1	Egyptian.....	10	8
Dredgers	0	1	Samoan	0	0
			Danish	1	3
			Belgian.....	1	1
			Chinese	6	2
			Hawaian	1	0
	3,440	3,425		3,440	3,425

SHIPPING ACTS.

DIGEST OF LAWS RELATING TO THE CARRIAGE OF PASSENGERS BY SEA, WITH APPENDIX,

AS EMBRACED IN

"THE PASSENGERS ACTS, 1855 AND 1863."

VOYAGES FROM UNITED KINGDOM.

Title and Scope of Acts.

- Section 1, Act 1855. Repeals Act of 1852.
- Section 2, Act 1863. Commencement of Act 1863.
- Section 13, Act 1863. Both Acts to be construed as one.
- Section 2, Acts 1855 and 1863. Short title of Acts and reference.
- Section 3, Act 1855. Definition and number and gender clause.
- Section 3, Act 1863. Definition of "passenger ship."
- Section 4, Act 1855. Ships and voyages to which Acts extend and exemptions.
- Section 4, Act 1863. Mail steamers not exempt.
- Section 5, Act 1855. Penalty on fraudulently using certificate of exemption, or using fraudulent certificates.

Machinery for executing Act.

- Section 6, Act 1855. Board of Trade to carry Act into execution.
- Section 7, Act 1855. Board of Trade may sue and be sued in the name of their Secretary or one of themselves, and to be exempt from personal liability.
- Section 8, Act 1855. Board of Trade to appoint Emigration Officers and Assistants in the United Kingdom for purposes of Act. Governors to appoint in the Colonies.
- Section 9, Act 1855. Duties of Emigration Officers to be performed by Officers of Customs in certain cases.
- Section 10, Act 1855. Facilities to Emigration Officers to inspect any ship, whether passenger ship or not.
- Sections 11 and 17, Acts 1855 and 1863. No passenger ship to be cleared without Emigration Officer's certificate that the requirements of the Act have been fulfilled, or without bond being given to the Crown.

Section 13, Acts 1853 and 1863. Passenger ship clearing out or sailing without obtaining Emigration Officer's certificate or giving bond to the Crown to be forfeited.

Matters relating to Ship to be attended to before sailing, Number of Passengers, Fittings, Stores, Surgeon, &c.

Section 13, Act 1855. Passengers to be carried only on two decks. Cabin passengers may be carried in poop or deck house in addition, if their number does not exceed one to every 100 tons of the ship's reg. tonnage.

Section 14, Act 1855. Rules for determining number of passengers to be carried.

Section 5, Act 1863. Number of passengers to be limited only by space, and not by tonnage check.

Section 15, Act 1855. Acts of 16 and 17 Vic., cap. 84, *not* to be repealed.

Section 16, Act 1855. Two lists of passengers to be delivered by master of every ship before clearance. Returns of deaths and births at sea to be sent to the Registrar-General by Custom House Officers and Consuls abroad.

Section 6, Act 1863. Cabin passengers to be included in lists.

Section 17, Act 1855. Lists of additional passengers embarked after clearance also to be delivered.

Section 18, Act 1855, and Section 7, Act 1863. Penalty on stowaways and those aiding them.

Section 19, Act 1855. All passenger ships to be surveyed. Appeal from Surveyor's report.

Section 20, Act 1855. Regulations as to beams and decks.

Section 21, Act 1855. Regulations as to arrangement and size of berths.

Section 22, Act 1855. Berthing of passengers. Single men to be in a separate compartment. Sexes to be berthed separately, except husband and wife, or children under 12 years.

Section 23, Act 1855. Berths not to be removed until passengers landed.

Section 24, Act 1855. Hospitals.

Section 25, Act 1855. Privies.

Section 26, Act 1855. Light and ventilation.

Section 27, Act 1855. Anchors, night signals, fire-engines, compasses, buoys, chronometers to be carried. Provisions regarding boats from beginning of Section to words "immediate use at sea," repealed by Merchant Shipping (life saving and appliances) Act, 1888.

Section 28, Act 1855. Manning.—Appeal against Emigration Officer's judgment as to efficiency of crew.

Section 29, Act 1855. Articles dangerous or injurious to health prohibited as cargo or ballast. Stowage of cargo and stores.

Section 8, Act 1863. Cattle in limited numbers and under certain conditions may be carried.

Section 30, Act 1855. Computation of voyages for sailing and steam vessels. Board of Trade may declare length of voyage in certain cases.

Section 31, Act 1855. Provisions and water for passengers and crew to be surveyed by Emigration Officer. Like articles of both to be of equal quality. Additional water for cooking.

Section 32, Act 1855. Emigration Officer may mark and direct bad provisions to be landed.

Section 33, Act 1855. Water casks and tanks.

Section 34, Act 1855. Proviso for touching at intermediate ports to fill up water.

Section 35, Act 1855. Dietary scale.

Section 9, Act 1863. Full issue of lime juice imperative only in tropics.

Section 10, Act 1863. Soft bread may be substituted for other bread-stuffs.

Section 36, Act 1855. Size of messes. Provisions to be issued daily before two o'clock, and such as require cooking in a cooked state.

Section 37, Act 1855. Board of Trade may authorise use of alternate dietary scale.

Section 38, Act 1855. Passengers' stewards,

Section 39, Act 1855. Cook and cooking apparatus.

Section 40, Act 1855. In what cases interpreters must be carried.

Section 41, Act 1855. In what cases a medical man must be carried.

Section 42, Act 1855. Qualification of medical men.

Section 43, Act 1855. Medicines and medical comforts.

Section 44, Act 1855. Medical inspector of passengers and medicines, &c. Proviso where no medical inspector can be obtained.

Section 45, Act 1855. Re-landing sick passengers.

Passengers' Rights before, during, and after the voyage.

Section 46, Act 1855. Return of passage money to sick passengers re-landed.

Section 11, Act 1863. Return of half-passage money to sick cabin passengers re-landed.

Section 47, Act 1855. Subsistence money to be paid to passengers so re-landed.

Section 48, Act 1855. Return of passage money if passage not provided according to contract.

Section 49, Act 1855. Subsistence money in case of detention.

Section 50, Act 1855. Stores to be replenished when ships put back, and report to be made immediately to Emigration Officer.

Section 14, Act 1863. Passengers' rights in case of wreck or other disaster off the coast. They may be landed for the ship to be repaired.

Section 52, Act 1855. The Secretary of State, Governor or Consul may pay expenses of taking off passengers at sea.

Section 15, Act 1863. Governors or Consuls may send on to their destination shipwrecked passengers, if the master of the ship fail to do so.

Section 16, Act 1863. Expenses incurred under last two sections to be a Crown debt.

Section 55, Act 1855. Insurance of passage-money not to be void on account of nature of the risk.

Section 56, Act 1855. Passengers not to be landed elsewhere than at destination.

Section 57, Act 1855. Passengers to be maintained 48 hours after arrival.

Section 58, Act 1855. Passengers' right of action preserved.

Miscellaneous Provisions.

Section 59, Act 1855. Rules may be prescribed by order in council for health, cleanliness, and ventilation.

Section 60, Act 1855. Surgeon and master to enforce such rules.

Section 61, Act 1855. Copy of Act and extract of Order in Council to be kept and exhibited on board.

Section 62, Act 1855. Sale of spirits on the voyage prohibited.

Section 63, Act 1855. Bond to the Crown by master, &c., in duplicate.

Section 17, Act 1863. Bond when owner, master, or charterer resides abroad.

Section 64, Act 1855. Counterpart of bond to be forwarded to colony.

Section 65, Act 1855. In the absence of agreement to the contrary the owner to be responsible in respect of any default in complying with requirements of Act,

Passage Brokers.

Section 66, Act 1855. No passage broker to act without a license.

Section 67, Act 1855. How passage brokers' licenses may be obtained (bond with two sureties), and how forfeited.

Section 69, Act 1855. Passage brokers to employ no agents except in writing.

Section 70, Act 1855. Penalty on persons fraudulently inducing others to engage passengers.

Section 71, Act 1855. Contract tickets to be given to cabin as well as other passengers, and to be *without* stamps.

Section 72, Act 1855. Penalty for altering or inducing any person to part with contract ticket.

Section 73, Act 1855. Summary remedy for breach of regulations in contract ticket provided.

Section 74, Act 1855. Penalty on cabin passengers and masters, &c., omitting to produce contract tickets.

Section 75, Act 1855. Penalty on persons acting as "emigrant runners" without licence and badge, and on those employing them

Section 76, Act 1855. Mode of licensing and registering "runners."

Section 77, Act 1855. "Emigrant runner's" licence to be renewed annually.

Section 78, Act 1855. Penalty on "runners" for certain acts of misconduct, and on persons using "runner's" badges not lawfully issued to them.

Section 79, Act 1855. Fresh badges may be obtained in case of loss or mutilation of old ones.

Section 80, Act 1855. Runners not entitled to commission from any passage broker unless acting with his authority, nor from emigrants for procuring them passages.

Section 81, Act 1855. List of runners to be exhibited by brokers, and sent to Emigration Officers.

Section 82, Act 1855. Trustees of docks may pass bye-laws for regulating landing and embarkation of emigrants, and for licensing emigrant porters. Bye-laws to be approved by Secretary of State.

Section 83, Act 1855. Penalty for falsifying documents to obtain passages from the Board of Trade; for falsely assuming to act as their agent; and on personation.

Clauses Relating to Penalties and Procedure.

Section 84, Act 1855. By whom penalties and compensation monies to be recovered.

Section 85, Act 1855. Tribunals for adjudicating on offences and complaints under the Act.

Section 86, Act 1855. Police and stipendiary magistrates, and in Scotland sheriffs, &c., have the same power as justices of the peace.

Section 87, 1855. No objection allowed or conviction quashed for want of form.

Section 88, Act 1855. Application of penalties; compensation thereout may be given to party aggrieved.

Section 89, Act 1855. Burden of proof lies on persons claiming exemption from Act. Proof of negatives.

Section 90, Act 1855. Proof of being Government Emigration Officer.

Section 91, Act 1855. Passengers to be competent as witnesses.

Section 92, Act 1855. Tender of amends.

Section 93, Act 1855. Limitation of actions against officers executing these Acts.

Section 94, Act 1855. Limitation of legal proceedings generally.

Voyages from the Colonies.

Section 95, Act 1855. Colonial voyages defined.

Section 96, Act 1855. Extension of Act to "Colonial voyages," with exceptions.

Section 97, Act 1855. Governors may proclaim length of voyages, with scale of diet, medicines, &c. Copy of such proclamation to be evidence and enforceable in any part of British dominions.

Section 98, Act 1855. Provision for survey of ships and appointment of surgeons in the Colonies.

Section 99, Act 1855. Governor-General of India may adopt the Act.

Voyages to the United Kingdom.

Section 100, Act 1855. List of passengers brought into the United Kingdom to be delivered to an Emigration Officer, by whom returns of births and deaths at sea are to be made to Registrar-General.

Section 101, Act 1855. Number of passengers limited by tonnage and space, as in the case of passenger ships from the United Kingdom.

Section 102, Act 1855. Provisions and water to be issued to passengers brought into the United Kingdom.

Appendix to Acts.

Sections 5, 6, and 7, Act 1872. Transfer of administration of Passenger Acts to Board of Trade by Sections 5, 6, and 7 of Merchant Shipping Act, 1872.

Passengers' Amendment Act 1870. Conveyance of naval and military stores authorised in passenger ships.

Copy notice in *London Gazette* of June 7, 1864, reducing declared length of voyage for certain steamers to North America.

Copy notice in *London Gazette* of June 9, 1882, amending entire scale for computation of voyages.

Copy notice in *London Gazette* of April 29, 1856, authorising shipowners to use another victualling scale instead of scale B in section 35 of Passenger Act, 1855.

Order in Council of August 9, 1866, requiring ships with fifty passengers to carry a surgeon on any voyage.

Order in Council of February 3, 1863, for preserving order in passenger ships to Victoria carrying as many as ten unprotected females.

Order in Council of January 7, 1864, for promoting order and health in passenger ships.

Order in Council of June 28, 1875, respecting distilling apparatus in passenger ships.

Section 37, Act 1874. As to registration of births and deaths at sea. Entry by master in official log book, and copy of same to be delivered to Registrar-General of Births and Deaths.

Suggestions by Board of Trade in official notice to masters of emigrant ships respecting boats and fire at sea (see Merchant Shipping Life Saving Appliances Act, 1888).

Sections 18, 19, and 20 of the Merchant Shipping Act, 1876. Provisions against double survey of passenger ships. Survey of

foreign passenger steamer or emigrant ship. Power of Board of Trade to modify Passengers' Acts as to food, space, and accommodation in emigrant ships.

DIGEST OF MERCHANT SHIPPING ACTS.

MERCHANT SHIPPING ACT, 1854.

PART I.—*Powers of Board of Trade and its Officers.*—Sections 1 to 16. Board of Trade has superintendence of all matters relating to merchant ships and seamen. Board to issue all instruments for carrying Act into effect, which are exempted from stamp duty. Penalty for forging seal and for fraudulent substitution of forms, &c. All fees and payments received by Board of Trade to go to Mercantile Marine Fund, and all fines to Consolidated Fund. Powers to Board's officers, including superintendents of mercantile marine offices, customs officers, and consuls to muster crews and inspect ship's papers. Board of Trade inspectors may report upon accidents or damage, &c., examine witnesses on oath, and inspect documents. Penalties for non-compliance and obstruction.

PART II.—*Deals with British Ships—their Ownership and Registry.*—Sections 17 to 29. Application of this part of Act to all Her Majesty's dominions. Ownership of British ships to be vested in British subjects or naturalised citizens, or bodies corporate legally established. British ships to be registered with following exceptions:—(1) Those registered before operation of Act. (2) Ships not exceeding 15 tons burthen employed in the coasting trade of United Kingdom, or in British possessions where managing owners reside. (3) Ships not exceeding 30 tons burthen without whole or fixed deck, and employed solely in fishing or trading within waters of British North America as defined. Ships not legally registered not entitled to recognition as British ships and not permitted to proceed to sea.

Rules for Measurement of Tonnage.—Computation of areas, allowances, ships measured, under Rule II., with cargo on board for purposes other than registry, ascertained tonnage to be deemed correct until remeasurement. Remeasurement of registered ships may be made, but not compulsory. Remeasurement of engine rooms improperly extended, provided. See Merchant Shipping (Tonnage) Act, 1889.

Registry of British Ships.—Sections 30 to 33. Registrars in United Kingdom and British possessions are the collectors and principal officers of customs; in Crown Colonies, governors. Application for registry and prior survey. Declaration of ownership by individuals and body-corporate. Penalty on builder for false certificate. No notice taken of trusts.

Certificate of Registry.—Sections 44 to 54. Certificates of Registry to be granted. Changes of owners and masters to be endorsed. Power to grant new certificate provided. Provision in case of loss. Provisional certificates to be delivered up. Custody of certificate. Delivery may be required under penalty for detention. Legal proceedings. Penalty for using improper certificate. Certificates of ships lost or ceasing to be British to be delivered up, &c.

Transfers and Transmissions.—Sections 55 to 65. Transfer of ships or shares therein. Declaration by transferee. Registration of transfer. Transmission of shares by death, bankruptcy, and marriage with necessary proof. Unqualified owners entitled by transmission

may apply to Court to sell ship. Power of Court and limit of time for application.

Mortgages.—Sections 66 to 108. Mortgages of ships and shares. Rights of mortgagees and their priority. Certificates of mortgages and sales and rules applicable thereto. New registry and transfer of registry provided on change of ownership. Penalties for forging certificates and for false declaration of national character of ship.

PART III.—*Masters and Seamen.*

Local Marine Boards.—Section 109.—Application of this part of Act. Sections 110 to 121.—Establishment of Local Marine Boards at ports where already in existence, and at such other ports as Board of Trade appoint. Election of members. Owners of foreign-going or home trade passenger ships have one vote for every 250 tons of shipping. Maximum number of votes to be ten for any one person. Voting powers of joint owners. List of voters to be kept by Collector of Customs, and revised every three years. Persons entitled to vote are only entitled to election. Board of Trade may appoint nominees on Board.

Mercantile Marine Offices.—Section 10 of Merchant Shipping Act, 1873, changes name of "Shipping Offices." Sections 122 to 130.—Establishment of shipping offices at Local Marine Board ports. Local Marine Boards may appoint and control officials of those offices, but their number and salaries controlled by Board of Trade. Business of these offices to be the engagement and discharge of seamen, securing their presence on board, and facilitating sea apprenticeships, &c., &c. Penalties against officials for misconduct. Board of Trade may conduct business of these offices at Custom Houses, where no Local Marine Boards exist, and at Sailors' Homes in London under their direct control.

Examinations and Certificates of Masters and Mates.—Sections 131 to 140. Examinations are instituted for masters and mates for certificates of competency. Local Marine Boards, where established, conduct examinations and appoint examiners under sanction and regulations of Board of Trade. Powers of Board of Trade to grant certificates of service to officers of certain rank in navy, and to others.

Certificated Officers necessary in certain Ships.—Foreign-going ships and home trade passenger ships, before proceeding to sea from United Kingdom, must each have a master possessing an appropriate certificate of competency or service. In addition, a foreign-going ship must have the first and second mates, or only mate, as the case may be, and in a home trade passenger ship the first or only mate, as the case may be, possessed of an appropriate certificate of competency or service. Ships of 100 tons burthen or upwards shall not go to sea unless at least one officer besides the master possesses a certificate as only mate, or one of a higher grade. Penalties for non-compliance and against persons for fraud. Certificates for foreign-going ships are available for home trade passenger ships. Authority of Registrar-General of Seamen as to granting, cancellation, and record of certificates and duplicates.

Apprenticeships to the Sea Service.—Sections 141 to 145. Superintendents of Mercantile Marine to bind apprentices and charge fees. Indentures of boys bound by guardians or overseers of the poor to be witnessed by two justices. All indentures exempt from stamp duty. Execution must be in duplicate, and registration necessary

at a Mercantile Marine Office within seven days after date. Assignments, desertions, cancellations, deaths, also to be reported. Apprentices to be brought before superintendent before each voyage in a foreign-going ship, and indentures produced.

Engagement of Seamen.—Sections 146 to 167. Board of Trade may license persons to procure seamen. Penalty against unlicensed persons supplying seamen (£20), and against employment of unlicensed persons, or receiving seamen illegally supplied (£20): penalty for receiving remuneration from seamen for shipping them, £5.

Agreements with Seamen.—Masters of every ship, except of ships less than 80 reg. tons employed in the coasting trade, must have agreements with their crews in the form sanctioned by the Board of Trade. Colonial ships may have agreements according to the law of their own possessions. All foreign-going British ships must have their agreements signed in the presence of a superintendent of Mercantile Marine. Agreements to be in duplicate, one copy being retained for Registrar-General of Seamen. Substitutes in the place of men who have signed, but have not kept their engagements from unforeseen causes, should, where practicable, be engaged at Mercantile Marine Office, but, if otherwise, should have the agreement read, and their signatures therein attested by a witness.

Running Agreements.—Foreign-going ships making voyages averaging less than six months may have running agreements; those must expire on the next following 30th June or 31st December, or on first arrival at port of destination in United Kingdom after such date, or upon discharge of cargo consequent upon arrival. Changes in crew on these agreements must be made at Mercantile Marine Office. Indorsement on agreement by master, necessary that all such changes have been duly made, and penalty for false endorsement, £20. Home trade ships not compelled to sign agreements at Mercantile Marine Office, but the agreement must be duly read, and the signatures of the crew attested by a witness before vessel puts to sea, or as soon after as possible. Shipping a seaman without obtaining due execution of agreement, is an offence entailing a penalty of £5 against master; like penalty provided against master or owner in case of a home trade ship. Changes in crews of foreign-going ships shall be reported by master before leaving United Kingdom, to nearest superintendent, under a penalty of £5. Seamen engaged in Colonies to be shipped before Shipping Master or Officer of Customs. Seamen engaged abroad must be shipped by the master before Consul, under a penalty of £20. Certificates of competency or service of master and necessary officers must be produced at Mercantile Marine Office on engagement, before outward clearance granted.

Deposit of Agreements.—Agreements of foreign-going ships to be delivered at Mercantile Marine Office within 48 hours after arrival in United Kingdom, or upon discharge of crew, whichever first happens. Certificate of delivery or inward clearance (BB) then granted; penalty provided for non-delivery.

Home Trade Agreements.—Not to extend beyond next following 30th June, or 31st December, or first arrival in United Kingdom after such dates, or on discharge of cargo consequent upon such arrival; home trade Agreements to be delivered to superintendent within 21 days after the dates of each half-year above. CC clearance then granted. In home trade passenger ships the production of the necessary certificate of master and officers also necessary. A

penalty of £5 incurred for default. Alterations in agreements void unless attested and made with consent of all parties. Falsifying agreement a misdemeanour. A copy of agreement must be made and put where accessible to crew at commencement of voyage, under a penalty against master of £5. Seamen discharged before voyage after signing agreement, entitled besides any wages earned, to compensation not exceeding one month's wages.

Allotments of Wages.—Sections 168 to 169. Regulations as to grant of allotment notes. Allotment notes may be sued on summarily by certain relatives of seamen. (See also M.S. Act, 1880, section 3.)

Discharge and Payment of Wages.—Sections 170 to 176. (See also M.S. Act, 1880, section 4.) Discharge of seamen in foreign-going ships to be before Superintendent of Mercantile Marine, master to deliver account of wages to each seaman. On discharge, master to give seamen certificates of discharge, and return certificates of competency or service to officers. Superintendent may decide questions referred to him by parties in disputes, his decision being final. Settlement of wages and signatures to release. Master to make reports of character of seamen.

Remittances of Wages and Savings Banks.—Sections 177 to 180. (See also M.S. Act, 1880, section 3.) Facilities by Board of Trade for remitting seamen's wages, allotment money, and establishment of savings banks at Mercantile Marine Offices.

Legal Rights of Seamen to Wages.—Sections 181 to 187. Legal rights to wages under different circumstances defined, period within which to be paid. (See also M.S. Act, 1880, section 4.)

Mode of recovering Wages.—Sections 188 to 191. Seamen may sue in a summary manner before justices except where sum amounts to over £50, when proceedings must be in a superior court. Masters' remedies for recovery of wages same as seamen's.

Relief to Seamen's Families out of Poor Rates.—Sections 192 to 193. Relief to seamen's families chargeable against wages, and notice to be given by owner and charge to be enforced on return of seamen.

Wages and Effects of Deceased Seamen.—Sections 194 to 204. Master to take charge of effects and pay, and hand over same with wages to Consul or Superintendent of Mercantile Marine. Accounts to be rendered and penalties for neglect. Administration of estates of deceased seamen by Board of Trade. Mode of payment under wills and provision for payment to creditors, &c. Unclaimed wages go to Consolidated Fund.

Leaving Seamen Abroad.—Sections 205 to 213. Seamen discharged abroad to receive proper certificate of discharge before Consul, and to be sent home at owner's expense. Forcing seamen on shore a misdemeanour. No seaman to be left abroad without certificate of some functionary. Wages to be paid when seamen left behind on ground of inability, such wages to be treated as money due to seamen, subject to payment of passage and subsistence home. Distressed seamen may be sent home at public expense, and masters of ships compelled to take them.

Volunteering into the Navy.—Sections 214 to 220. Conditions under which seamen are allowed to leave their ships in order to enter the Navy, and regulations as to payment of wages to Queen's officer on account of such seamen, &c.

Provisions as to Health and Accommodation.—Sections 221 to

230. Survey of provisions and water on complaint provided. Allowance for short provisions. Weights and measures to be kept by masters. Expenses of medical attendance in cases of illness and death. Inspectors of medicines how appointed. Expenses of injury, illness, hurt, &c., if paid by Consul are recoverable from owner. Medicines to be carried in ships.

Power of making Complaint.—Section 232. Seamen to be allowed to go on shore to make complaint before a justice.

Protection of Seamen from Imposition.—Sections 233 to 238. Charges against seamen's wages invalid. Debts recoverable. Penalties against persons going on board without permission (see also M.S. Act, 1880, section 5). Penalty for solicitations by lodging-house keepers.

Discipline.—Sections 239 to 259. Offences on board ship defined with penalties attached. Removal of masters. Power of Board of Trade or Local Marine Boards to investigate charges of incompetency or misconduct against officers, and cancel or suspend certificates of competency or service. Desertion or refusing to join (see also M.S. Act, 1880, section 10). Acts of smuggling or embezzlement. Entry of offences to be made in official log and read over to offenders. Deserters may be arrested and sent on board. Proof of desertion. Cost of imprisonment to extent of £3 chargeable against wages. Forfeiture of wages and how applied. Fines to be deducted from wages and paid to superintendents. On change of masters all documents to be handed to successor.

Crimes committed on the High Seas and Abroad.—Sections 267 to 270. Offences of seamen abroad. Conveyance of offenders and witnesses to United Kingdom or British Possessions. Inquiry into cause of death provided and nature of evidence.

Registration of and Returns respecting Seamen.—Sections 271 to 279. Register Office of shipping and seamen established at Port of London. Delivery of lists of crew for foreign-going ships at Mercantile Marine Office within 48 hours after arrival. Lists of crews in home-trade ships to be delivered within 21 days after termination of each 30th June and 31st December. Lists to be delivered in case of transfer or loss. Lists of crew to be deposited at Custom Houses and Consulates when vessels are abroad.

Official Logs.—Sections 280 to 287. Official logs to be kept in form sanctioned by Board of Trade. Entries to be made in due time therein. Entries as to convictions, offences, punishments, conduct of crew, illnesses and injuries, deaths, births, marriages, quitting of ship, wages of deceased seamen and sale of their effects, collisions, &c., necessary. Entries how to be signed. Penalties for not keeping official log and neglecting to make entries. Delivery of official logs at end of voyage, or in cases of transfer, or loss of ship, necessary.

East Indies and Colonies.—Section 288 to 290. Provisions of Act by East Indian and Colonial Governments to their own ships may be enforced throughout the Empire, and conflict of laws.

PART IV.—*Safety and Prevention, or Accidents.*

Sections 291 to 326. Sections 292, 293 and 294, regarding boats carried by sea-going ships, repealed by Merchant Shipping (Life Saving and Appliances) Act of 1888, except so far as they relate to sea fishing boats, registered under Sea Fisheries Act, 1868. Equipment of steamships defined, and survey of passenger steamships.

Passenger steamships when to be surveyed. Powers of surveyors and nature of inspection. Passenger certificates and power of Board of Trade to cancel or grant. Penalty for carrying passengers in excess of number specified in certificate. Twelve persons allowed to be carried in any ship other than the master and crew, the owner, and his family and servants, without certificate. (See Merchant Shipping Act, 1876, section 16.) Offences against Act.

PART V.—*Pilotage.*

(See also Merchant Seamen's Pilotage Act, 1889).

Sections 330 to 338. This part of Act applies to United Kingdom only. General jurisdiction of Pilotage Authorities and power to exempt from compulsory pilotage. Regulations as to grant of licences and certificates, and to alter and reduce rates as well as limits of pilotage districts. Power to make bye-laws, reserving liberty of persons aggrieved to appeal to Board of Trade to rescind or annul same. Pilotage authorities to make full returns to Board of Trade of particulars of pilotage. Power to transfer powers of local authorities in case of their failure to Trinity House. Masters and mates may, if examined and passed, be licensed to pilot particular ships. Pilot boats to be licensed and marked with certain characteristics. Pilot licences to be registered, and delivered up when required or on death.

Compulsory Pilotage.—Mode of enforcement and penalties. Home trade passenger ships to employ qualified pilots, unless they have certificated masters and mates. Mode of granting certificates as pilots to masters and mates.

Rights, Privileges, and Remuneration of Pilots.—Penalties for receiving or offering improper rate. Allowances. Penalties for unqualified persons acting. Occasions when unqualified persons may act in absence of licensed pilot or when ship in distress. Offences of pilot for misconduct, &c. Trinity House powers. To alter regulations and appoint sub-commissioners, &c. Compulsory pilotage in London district. Penalty on masters failing to display usual signal-flags passing Dungeness. Exemptions of certain ships not carrying passengers from compulsory pilotage in London and Trinity House outport districts. Rates of pilotage (Trinity House) and payments to be made to pilot fund (Trinity House).

PART VI.—*Lighthouses.*

Management of Lighthouses.—Sections 389 to 416. Buoys and beacons to be in control of Trinity House, Commissioners of Northern Lighthouses, &c. Powers of inspection granted in Scotland and Ireland. Board of Trade possess powers to inspect.

Light Dues.—Power to levy. Dues subject to revision by Her Majesty in Council. Ship not to be cleared without production of receipt for light dues. Power to lighthouse authorities to erect lighthouses, buoys and beacons, and collect dues therefor.

Surrender of Local Lighthouses.—May be surrendered to general lighthouse authorities.

Damage to Lights, &c.—Penalty for injuring £50.

Prevention of False Lights.—Power to prohibit; and, if not obeyed, power to abate.

PART VII.—*Mercantile Marine Fund.*

Sections 417 to 431 (see also Mercantile Marine Fund Act, 1884). Sums to be carried to Mercantile Marine Fund and application

thereof. Fund includes light dues and all sums and fees received by Receivers of Wreck in Part VIII. of Act. Power of Treasury to advance money for lighthouse purposes. Board of Trade may borrow on credit of Fund. Lighthouse authorities to account for moneys to Board of Trade. Ships of lighthouse authorities exempt from harbour dues.

PART VIII.—*Wrecks, Casualties, and Salvage.*

Sections 432 to 501 (see also Merchant Shipping Act, 1876). Inquiries into wreck. Inquiries may be instituted. Formal investigation before justices. Stipendiary magistrates' powers. Certificates of competency or service of officers may be required to be delivered up until close of inquiry.

Appointments and Duties of Receivers of Wreck.—Board of Trade given powers to appoint. Powers of Receiver in case of accidents. All articles washed ashore to be delivered to Receiver. Powers to suppress plunder and disorder. General powers in cases of distress. Power to examine on oath and obtain declarations. Persons finding wreckage to deliver up same and give notice. Powers of seizure of wreckage.

Salvage.—Salvage payable in respect of services in the United Kingdom. Board of Trade may pay salvage in respect of preservation of life out of Mercantile Marine Fund. Settlement in case of dispute left to Justice of Peace where amount is not above £200, above this sum to Court of Admiralty in England or Ireland and Court of Session in Scotland. Payment apportionment and method of enforcing salvage moneys. Unclaimed wreck to be sold; also to be given up to Lord of Manor in certain cases. Jurisdiction of High Court of Admiralty and offences in respect of wreck. Salvage by Her Majesty's ships not allowable in respect to risk of Her Majesty's property. Admiralty must consent before claim by naval ships for salvage. Voluntary agreements may be made effective. (See also 27 and 42.)

PART IX.—*Liability of Shipowners.*

Sections 502 to 516. Applies to all Her Majesty's dominions. Limitation of liability. Owner not liable in respect of certain articles. Provision for separate losses.

Mode of Procedure.—In cases of loss of life or personal injury. Power of Board of Trade in proceedings. If Board of Trade decline to institute proceedings, individuals may bring actions. Proceedings in case of several claims on owner, &c., &c.

PART X.—*Legal Procedure.*

Sections 517 to 543. Punishment of offences and recovery of penalties. Stipendiary magistrate to have same powers as two justices. Offence deemed to have been committed where same arose, or where offender may be. Jurisdiction over ships on the coast. Service of summons or other document good if personal or on board ship. Distress on ship for sums ordered to be paid. Limitation of time in summary proceedings. Power to arrest foreign ship given in case of damage. Power to detain ships in certain cases before application made to Judge of Admiralty.

Legal Procedure in Scotland.—Offences, complaints, evidence, and penalties defined.

PART XI.—*Miscellaneous.*

Sections 548 to 551. Contracts may be made with natives in India, binding them to go to Australia, and thence to serve in other ships of United Kingdom. Sailors' Homes. Corporations may grant sites for sailors' homes. Colonial Legislatures may alter provisions of Act. Expenses incurred by Commissioners of Customs in suits or prosecutions under this Act may be paid out of Consolidated Fund.

MERCHANT SHIPPING (AMENDMENT) ACT, 1855.

An Act to facilitate erection and maintenance of Colonial light-houses. Gives power to fix dues, to be levied with consent of Colonial Legislature. Extends powers of relieving destitute seamen to Colonies, as provided under Part III. of Merchant Shipping Act, 1854. Power of relief to destitute Lascar seamen, &c.

SEAMEN'S SAVINGS BANK ACT, 1856.

Power to Board of Trade to establish savings banks for seamen, and to constitute Mercantile Marine offices branch savings banks. Commissioners for Reduction of National Debt to receive deposits and pay interest. Board of Trade to make regulations for conduct of banks. Punishment for forgery or for false representations in order to obtain deposits or interest. Mode of criminal proceedings. (See also Merchant Shipping Act, 1880, section 3, as to payment of allotments to savings banks by seamen.)

MERCHANT SHIPPING ACTS, &C., AMENDMENT ACT, 1862.

Sections 3 to 4. Equities not excluded by Merchant Shipping Act, 1854. Tonnage rates under local Acts may be levied on the registered tonnage.

Certificates for Engineers.—Sections 5 to 12 (see also Part III. Merchant Shipping Act, 1854). Steamships to carry certificated engineers. A foreign-going steamship, if over 100 nominal horse power, must have two engineers: the first possessing a "first-class certificate," the second a "second-class certificate," or one of a higher grade. Every foreign-going steamship of less than 100 nominal horse power shall have an engineer possessing a "second-class engineer's certificate," or one of a higher grade. Every sea-going home trade passenger steamship must have as its only or first engineer an engineer possessing a "second-class certificate," or one of a higher grade. Examinations for engineers' certificates of competency instituted under Board of Trade. Power of Board of Trade and Local Marine Boards to investigate charges of misconduct against engineers and cancel or suspend certificates.

Masters and Seamen.—(See also Part III. of Merchant Shipping Act, 1854.) Sections 13 to 38. Part III. of Act to apply to fishing boats, lighthouse vessels, and pleasure yachts, with certain exceptions. Title of shipping masters in principal Act of 1854 changed to superintendents, and term "shipping offices" to "mercantile marine offices." Punishment for embezzlement in mercantile marine offices provided. Payment of wages to seamen abroad under Section 209 of principal Merchant Shipping Act, 1854, may be made by Bill under certain circumstances.

Deceased Seamen's Wages.—Board of Trade have power to recover from owner same as wages earned. Ships not heard of within 12

months to be deemed lost. Relief of distressed seamen to be regulated by Board of Trade. (See Sections 211 and 212 of Act of 1854.)

Cancelling Certificates of Masters, Mates, and Engineers.—Power of cancelling rests with Court that hears case. Certificate to be delivered up under penalty when suspended or cancelled.

Safety.—Sections 25 to 38. Regulations *re* lights. Fog signals and sailing rules. Regulations to be published, and masters and owners bound to obey them. Breach of regulations to imply wilful default of person in charge. Board of Trade surveyors have power to inspect for enforcing regulations. Rules for harbours under Local Acts to be in force. In collisions one ship bound to assist other. Surveys of steamers and penalties provided against passengers and others for misconduct.

Pilotage.—(See also Merchant Seamen's Pilotage Act, 1889.) Sections 39 to 42 (see also Part V. Merchant Shipping Act, 1854). Powers of local authorities to exempt from compulsory pilotage. Provisional orders of Board of Trade may transfer pilotage jurisdiction and make arrangements as to rates and districts, &c.

Lighthouses.—(Part VI., M.S. Act, 1854.) Sections 43 to 48. Lights under local authorities to be inspected by Trinity House and other general authorities. Liability for and recovery of light dues provided. Application of accounts and dues.

Wreck and Salvage.—(See Part VIII. M.S. Act, 1884.) Sections 49 to 56. Summary Jurisdiction Act extended in small salvage cases. Receiver may appoint a valuer. Crown rights to wreck unclaimed provided.

Liability of Shipowners.—(See also Part IX. of M.S. Act, 1854.) Sections 54 to 56. Shipowners' liability limited in being answerable for damage for loss of life or personal injury to extent of £15 for each ton of his ship's tonnage; nor in respect of loss or damage to ships' goods or merchandise beyond £8 per ton (registered tonnage). Proof of passengers on board ship may be accepted from master's list or duplicate list under "Passengers' Act, 1885."

Arrangements concerning Lights, Sailing Rules, Salvage, and Measurement of Tonnage in case of Foreign Ships.—Sections 57 to 64. Foreign ships in British jurisdiction subject to regulations for preventing collisions at sea. Power of foreign Powers to adopt regulations which may be applied to their ships on high seas. Provisions concerning salvage applicable to foreign Powers with their consent. Foreign countries adopting British measurement need not be remeasured in this country. Orders in Council and their effect.

Delivery of Goods and Lien for Freights.—Sections 66 to 78. Interpretation of terms. Power of shipowners to enter and land goods in default of entry and landing by owner of same. If when landed and shipowner gives notice his lien for freight continues. Lien may be discharged on payment of freight. Warehouse owner may sell goods by public auction after 90 days, if freight not discharged. How sale of goods effected and application of proceeds.

Schedule to Act, Table A, Enactments repealed. Table B, Fees chargeable on examination of Engineers. Table C, Regulation for preventing collisions at sea.

MERCHANT SHIPPING ACT, 1867.

Medicines, Medical Stores, and Anti-Scorbutics.—Lime or lemon juice and other anti-scorbutics are to be provided and kept on board certain ships, viz.:—All foreign-going ships, except those bound to

European ports or Mediterranean, and those bound to eastern coast of North America, north of 35th deg. of N. latitude. Lime and lemon juice and sugar to be served out daily at the rate of an ounce per day to each member of crew. Penalty provided against seamen for refusal to take same. Medicines and medical stores to be kept on board all ships being navigated between the United Kingdom and places outside it, according to Board of Trade published scale. Lime or lemon juice to be obtained from bonded warehouse, and to be of due strength, and properly inspected. Penalty provided for selling medicines of bad quality, &c. Seamen's expenses in case of illness through neglect of owner or master to be paid by them. Seaman forfeits his wages when illness is caused by his own default.

Accommodation of Seamen on Board British Ships.—Seventy-two cubic feet to be allowed for each man, and not less than twelve superficial feet of measurement on deck or floor, and to be properly constructed and clear.

Rules for Medical Inspection of Seamen.—Board of Trade or Local Marine Board may appoint medical inspector at any port who may examine seamen seeking employment on the application of master or owner. Jurisdiction over offences committed by British subjects on board foreign ships.

MERCHANT SHIPPING ACT, 1871.

Section 5. Ship's draught of water to be recorded by master in official log book on leaving docks, ports, or harbours.

Rules to be Observed in Naming Ships.—Ship's name to be described according to that which she is registered. Penalties provided for breach of Act (£100).

Change of Name.—Application to change name must be made to Board of Trade.

Masters and Seamen.—(See Part III. of Merchant Shipping Act, 1854.) Sections 7 and 8. Survey of a ship alleged to be unseaworthy—in proceedings against seamen or apprentices for desertion or refusing to join—may be demanded by one-fourth of the men belonging thereto, if unseaworthiness, overloading, &c., is alleged. If the number of seamen exceed 20 this survey may be demanded by not less than 5 such seamen. Board of Trade or other surveyor may act at discretion of Court hearing case. Naval Courts may direct a survey of any ship which is the subject of proceedings before them.

Safety.—(See Part IV. Merchant Shipping Act, 1854.) In collisions, masters of vessels to give name and port of registry of each vessel to each other.

MERCHANT SHIPPING ACT, 1872.

Measurement.—Sections 3 and 4. Transfer to Board of Trade of duties of Custom Officers with respect to measurement of ships; and to Registrar-General of Seamen of duties with respect to registry of ships.

Passenger Ships.—Sections 5 to 8. Transfer to Board of Trade of powers of Emigration Commissioners. Annual survey of passenger steamers provided.

Pilotage.—Powers of Trinity House in connection with pilotage laws and rates in certain districts.

Chain Cables.—Fees and expenses in relation to testing by Trinity House to be charged on Mercantile Marine Fund, &c., &c.

THE MERCHANT SHIPPING ACT, 1873.

Registry Marks.—Sections 1 to 6. (See Part II. Merchant Shipping Act, 1854.) British ships for future to be marked with name on each of her bows, and name and port of registry on stern; scale of feet indicating draught of water to be marked on each side of stem and stern posts. Board of Trade have power to exempt certain classes of ships. Penalty against owner or master provided for non-compliance. Particulars of clear side to be recorded as well as draught of water. (See Merchant Shipping Act, 1871, section 5.) Foreign ships not to be placed on British register without consent of Board of Trade. Reductions on re-registration of abandoned ships.

Masters and Seamen.—(See Part III. Merchant Shipping Act, 1854.)

Agreements with Seamen.—Sections 7 to 10. Instead of stating nature and duration of voyage as required by section 249 of Act of 1854, may state maximum period and places where voyage *not* to extend. Compensation to seamen for unnecessary detention on charge of desertion provided. Power of Board of Trade to establish mercantile marine offices, and to hold examinations at ports where no local marine Board exists. Power of Board of Trade to vary requirements as to boats. Duties of masters in collision, and failure to render assistance or give names of vessels rendered a misdemeanour, &c. Signals of distress, and signals for pilots—penalty for not displaying or improperly using. Right to use private signals on registering same. Notice of apprehended loss to be given to Board of Trade under penalty. Restrictions on carriage of dangerous goods, and forfeiture of same. Section 15, repealed by Merchant Shipping (Life Saving and Appliances) Act, 1888.

Miscellaneous.—Sections 29 to 33. Fees in respect of surveys payable to Board of Trade. Board of Trade in legal proceedings may sue in name of any of their officers, &c.

MERCHANT SHIPPING ACT, 1876.

Unseaworthy Ships.—Sections 4 to 12. Sending an unseaworthy ship to sea a misdemeanour. Obligation of shipowner to crew to secure seaworthiness. Power of Board of Trade to detain unsafe ships, and procedure for such detention. Constitution of Court of Survey for appeals. Procedure and powers of Courts of Survey. Liability of Board of Trade and shipowner for costs and damages. Power to require from complainant security for costs. Powers of detaining officers, and supplemental provisions as to detention of ships.

Foreign Ships Overloading.—Section 13. Application to foreign ships of provisions as to detention when loading at ports in United Kingdom. Modifications.

Appeal on Refusal of certain Certificates to Ships.—Section 14. Appeals by shipowners feeling aggrieved provided, or refusal of certificates as to equipment, &c., under Merchant Shipping and Passengers' Acts.

Passenger Steamers and Emigrant Ships.—Sections 16 to 21. Twelve passengers may be carried in any steamer without passenger certificate. Colonial passenger certificates to be deemed valid. Power of Board of Trade to dispense with survey of foreign ships holding foreign certificates of survey as passenger ships, attested by British Consul. Certain signals, lights, and buoys necessary in all passenger ships.

Deck Cargoes.—Section 23. Space occupied by deck cargo made liable to dues. Tonnage thereof to be ascertained and entered in official log by an officer of Board of Trade or Customs. Penalties for carrying deck loads of timber in winter (arriving between October 31, and April 16) provided.

Deck and Load-Lines.—Sections 25 to 28. Deck lines to be marked on British ships (except under 80 tons register employed solely in coasting trade, ships employed solely in fishing and pleasure yachts). Description of lines. British vessels (with similar exceptions) to be marked with load-line circular discs as defined, the centre of which indicates the maximum load-line in salt water. Disc to be recorded on clearing outwards at Custom House, and in articles of agreement and in official log. Load-line to be marked on coasting vessels of over 80 tons register. Penalty of £100 provided for offences in relation to marks on ships (see also Merchant Shipping Act, 1890, *re* Construction of 26th and 27th Section).

Investigations into Shipping Casualties.—Sections 29 to 33. Appointment of Wreck Commissioner by Lord Chancellor provided. Assistance of assessors provided when cancellation or suspension of officers' certificates involved. Power of Wreck Commissioner to investigate cases of distress, stranding and missing ships. Board of Trade fix places of investigation.

Detention.—Section 34. Enforcement of detention and penalty for illegally proceeding to sea with detaining officers on board.

Managing Owner.—Section 36. Name of managing owner or ships' husband to be duly registered at Custom House of port of registry who is under all obligations and liabilities of Merchant Shipping Acts.

Foreign Ships.—Section 37. With consent of foreign States provisions of any portion of Merchant Shipping Acts may be applied by Order in Council to ships of those States when out of their own jurisdiction.

SHIPPING CASUALTIES INVESTIGATION ACT, 1879.

Section 2. Rehearing of and appeal against investigation into shipping casualty or misconduct of officers provided.

Section 3. Rules as to investigations into shipping casualties and misconduct of officers. List of assessors to be in force for three years only, and to be appointed under Section 30 Merchant Shipping Act, 1876. Certificates of Officers.—Where cancellation or suspension likely to be involved, two assessors to assist in hearing. Investigations into casualties. Where to be held.

MERCHANT SHIPPING (CARRIAGE OF GRAIN) ACT, 1880.

Section 3. General obligation to prevent cargo shifting.

Section 4. Precautions against shifting of grain laden in Mediterranean or Black Sea or North America. Carriage between decks prevented except for quantity for feeding cargo in hold. Exemption where feeders are provided. Where grain carried in bulk without feeders one-fourth to be in bags laid upon grain in bulk. Oats or cotton seed not included in this provision, nor ships of less than 400 reg. tons not engaged in Atlantic trade; nor ships laden in Mediterranean or Black Seas provided with compartments in holds and with longitudinal bulkheads or shifting boards; nor to ships in which grain does not exceed *one-half* of whole cargo, and the rest wool, flax, or flour, or other suitable cargo properly stowed. General provisions for proper bulkheads or shifting boards and safe stowage.

Section 5. Ships laden in accordance with regulations of Board of Trade are exempted from penalties provided by Act.

Section 6. Notice by master of kind and quantity of grain cargo to be given to British Consular Officer or Officer of Customs abroad.

Sections 8 and 9. Board of Trade has power to enforce Act. Mode of prosecution and recovery of penalties, &c.

MERCHANT SEAMEN (PAYMENT OF WAGES AND RATING) ACT, 1880.

Advance Notes.—Section 2. Advance notes made illegal when beyond one month's wages. (See Merchant Shipping Act, 1889, Chapter 46, Section 2.)

Allotments.—Section 3. Seamen may leave half their wages under allotments to relatives mentioned in Section 169 of M.S. Act, 1854, or may leave allotment payable to Seamen's Saving Bank.

Payment of Wages.—Section 4. Seaman entitled on leaving ship at end of engagement to £2, or one-fourth of balance due him—whichever is least; remainder to be paid within two clear days (exclusive of any Sunday or Bank Holiday) after leaving ship. Delivery of wages account at Mercantile Marine Office instead of to seaman himself at master's option (see Section 171, M.S. Act, 1854). Final settlement of wages may be left to superintendent if seaman consents. Wages in case of non-payment within required period run on until final settlement. In cases of dispute where sum does not exceed £5 superintendent may arbitrate.

Section 5. Penalty provided against persons being on board without permission before seamen leave, £20 (see Section 237, M.S. Act, 1854). This provision may be applied to foreign-going ships by order in Council.

Rating of Seamen.—Section 7. Seamen entitled to be rated A.B.s on proof of certain sea-service.

Section 8. Power of Court to rescind contracts between master or owner and seaman or apprentice.

Seamen's Lodging-houses.—Section 9. Board of Trade may license and approve of bye-laws and regulations made by Sanitary Authority at ports.

Desertion.—Section 10. Imprisonment for desertion abolished, but power of arrest and conveyance on board provided. (See also Merchant Shipping Act, 1889, Section 3.)

Section 11. Benefits of Employers' and Workmen's Act, 1875, extended to seamen.

MERCHANT SHIPPING (FISHING BOATS) ACT, 1883.

Sections 3 to 12. Application of Act. Apprenticeship to the sea-fishing service, and agreements with boys under sixteen.

Sections 13 to 23. Articles of agreement to be made with seamen in fishing service.

Sections 24 to 27. Deals with the wages and discharge of seamen, and the duties of skippers.

Sections 28 to 35. Provisions as to discipline, amenities, and penalties in the sea-fishing service.

Sections 36 to 42. Issue of certificates of competency to skippers and second hands by Board of Trade.

Sections 43 to 47. Enactments relating to deaths, injuries, punishments, ill-treatment, and casualties. Disputes between skippers or owners and seamen.

Sections 48 to 55. Miscellaneous.

THE MERCHANT SHIPPING (MISCELLANEOUS) ACT, 1887.

The provisions of this Act, passed in the 1886 session of Parliament, amending in certain minor particulars some of the enactments relating to merchant shipping and seamen, may be learned in the following summary :—

Section 1 gives the title of the Act as above, and recites that it may be construed as one with the Merchant Shipping Act, 1854, and amending Acts, and that this Act and those Acts may be cited collectively as the Merchant Shipping Acts, 1854 to 1887.

Fees on Examinations of Engineers.—Section 2 recites that by Section 7 of the Merchant Shipping Act Amendment Act, 1862, it is provided that fees payable by applicants for certificates of competency as engineers shall be carried to the account of the Mercantile Marine Fund, and that at the time of the passing of that Act the salaries of the surveyors who conduct the examinations were paid out of that fund.

And, further, that by Section 39 of the Merchant Shipping Act, 1876, it was provided that the salaries of the said surveyors should be paid out of moneys provided by Parliament ; and by Section 4 of the Merchant Shipping (Fees and Expenses) Act, 1880, it was provided that the fees paid by the applicants for engineers' certificates of competency should be paid into the exchequer.

And it further recites that under Section 3 of the Merchant Shipping (Expenses) Act, 1882, the salaries of the said surveyors are charged on and paid out of the Mercantile Marine Fund, and it is expedient that the fees paid by the applicants for examination should be carried to the account of the Mercantile Marine Fund. It is, therefore, enacted that the fees payable in pursuance of Section 7 of the Merchant Shipping Act Amendment Act, 1862, shall cease to be payable into the exchequer ; and all such of those fees as have been levied since April 1, 1883, or are hereafter levied, shall be carried to the account of the Mercantile Marine Fund.

Powers of Colonial Governors re Measurement and Registry of Ships.—Section 3 recites that doubts have been expressed as to the extent of the powers conferred on certain Colonial authorities by Section 31 of the Merchant Shipping Act, 1854, and it is therefore enacted that the powers conferred by *that* section on the Governor, Lieutenant-Governor, or other person administering the Government in a British possession, shall be deemed to include the following powers :—

(a) Power to approve a port or place within the possession for the registry of ships ; and (b) power to appoint surveyors within the limits of the possession to survey and measure ships for registry or re-registry as British ships, in accordance with the provisions of the Merchant Shipping Acts, 1854 to 1887.

Public Records in Custody of Registrar-General of Seamen.—Section 4 enacts that all documents which, under Section 277 of the Merchant Shipping Act, 1854, or enactments amending same, are required to be recorded and preserved by the Registrar-General of Seamen, shall be deemed to be public records and documents within the meaning of the Public Record Offices Acts, 1838 to 1887, and those Acts shall, where applicable, apply to such documents in all respects as if they had been specifically referred to in the said Acts.

Explanation of Meaning of Lighthouses.—Section 5 enacts that in the Merchant Shipping Act, 1854, and amending Acts, the expres-

sion "lighthouses" shall, in addition to the meaning therein assigned to it, include sirens and all other descriptions of fog signals; and the expression "new lighthouse" shall include the addition to any existing lighthouse of any approved light, or any siren, or any description of fog signal.

Repeals.—Section 6 is the last in the Act, and merely repeals Section 48 of the Seamen's Fund Winding-up Act, 1851, and Section 4 of the Merchant Shipping (Fees and Expenses) Act, 1880.

MERCHANT SHIPPING (LIFE SAVING & APPLIANCES) ACT, 1888.

Section 1. Obligation of owners and masters to carry boats and other appliances in British merchant ships for saving life.

Section 2. Authority of Board of Trade to appoint a consultative committee for framing rules under Act. Tenure of office, &c.

Sections 3 and 4. Power to make rules as to life-saving appliances, and penalties provided for breach of rules.

Sections 5, 6, and 7. Power of Board of Trade to inspect and enforce rules. Rules not to apply to sea-fishing boats. Power provided to proceed for breach of other Acts.

Sections 8, 9, and 10. Repeals after first publication of rules, sections 292, 293, and 294 M. S. A., 1854, as to boats to be carried, except so far as they relate to sea-fishing boats, registered under Sea Fisheries Act, 1868. Repeals section 27 of Passengers Act, 1855, from the beginning to words "immediate use at sea"; and repeals section 15 M. S. A., 1873.

Sections 9 and 10. Construction and short title of Act.

Schedule 1 of Act specifies constitution of committee and number of representatives from Chamber of Shipping, Liverpool and Glasgow Associations, Council of Naval Architects, Shipmasters' Societies, Seamen's Societies, Lloyd's Committee, Lloyd's Register Society, and Committee of London Underwriters.

Schedule 2. Matters for which rules are to provide, including arrangement of British ships into classes; boats, buoys, and other apparatus and appliances to be carried.

RULES MADE BY THE BOARD OF TRADE.

(Which came into effect on November 1, 1890.)

For the purposes of these rules, British ships shall be arranged into the following classes:—

DIVISION (A).—*Class 1.*—Steamships carrying emigrant passengers, subject to all the provisions of the "Passengers Acts." *Class 2.*—Foreign-going steamships having passenger certificates under the "Merchant Shipping Acts." *Class 3.*—Steamships having passenger certificates under the "Merchant Shipping Acts" authorising them to carry passengers anywhere within the home-trade limits; that is to say, between places in the United Kingdom, or between the United Kingdom and ports in Europe between the River Elbe and Brest.

DIVISION (B).—*Class 1.*—Sailing ships carrying emigrant passengers subject to all the provisions of the "Passengers Acts." *Class 2.*—Foreign-going sailing ships carrying passengers, but not subject to all the provisions of the "Passengers Acts." *Class 3.*—Foreign-going sailing ships not carrying passengers. *Class 4.*—Foreign-going steamships not certified to carry passengers.

DIVISION (C).—*Class 1.*—Steamships not certified to carry

passengers plying anywhere within the home-trade limits. *Class 2.*—Sailing ships in the same trades not carrying passengers.

DIVISION (D).—*Class 1.*—Steamships having passenger certificates authorising them to carry passengers within certain specified limits of the home-trade; that is to say, on short specified passages along the coasts of the United Kingdom, or between Great Britain and Ireland, or between Great Britain or Ireland and the Isle of Man. *Class 2.*—Steamships carrying passengers on short excursions or pleasure trips, to sea, or in estuaries or mouths of rivers during daylight. *Class 3.*—Steamships carrying passengers on rivers (and) (or) lakes, but not going to sea or into rough waters.

DIVISION (A).—**CLASS I.**—*Rules and Tables for steamships carrying Emigrant Passengers, subject to all the provisions of the "Passengers Acts."*

(a) Ships of Division (A), *Class 1*, shall carry boats placed under davits, fit and ready for use, and having proper appliances for getting them into the water, in number and capacity not less than prescribed by the following table; such boats shall be equipped in the manner required by and shall be of the description defined in the General Rules appended hereto.

(b) Masters or owners of ships of this class claiming to carry fewer boats under davits than are given in the following table must declare before the collector or other officer of Customs, at the time of clearance, that the boats actually placed under davits are sufficient to accommodate all persons on board, allowing 10 (ten) cubic feet of

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Note.—Where in ships already fitted the required cubic contents of boats placed under davits is provided, although by a smaller number of boats than the minimum required by this table, such ships shall be regarded as complying with the rules as to boats to be carried under davits.

(d) Not less than half the number of boats placed under davits shall be boats of Section (A) or Section (B). The remaining boats may also be of such description, or may, in the option of the ship-owner, conform to Section (C), or Section (D), provided that not more than two boats shall be of Section (D).

(e) If the boats placed under davits in accordance with the foregoing Table (c) do not furnish sufficient accommodation for all persons on board, then additional wood, metal, collapsible or other boats of approved description (whether placed under davits or otherwise) or approved life rafts shall be carried. One of these boats may be a steam launch; but in that case the space occupied by the engines and boilers is not to be included in the estimated cubic capacity of the boat.

Subject to the provisions contained in paragraph (g) of these rules, such additional boats or rafts shall be of at least such carrying capacity that they and the boats required to be placed under davits by Table (c) provide together in the aggregate three-fourths more than the minimum cubic contents required by column 3 of that Table. For this purpose 3 cubic feet of air case in the life raft is to be estimated as 10 cubic feet of internal capacity. Provided always that the rafts will accommodate all the persons for which they are to be certified under the Rules.

All such additional boats or rafts shall be placed as conveniently for being available as the ship's arrangements admit of, having regard to the avoidance of undue encumbrance of the ship's deck, and to the safety of the ship for her voyage.

(f) In addition to the life-saving appliances before mentioned, ships of this Class shall carry not less than one approved life-buoy for every boat placed under davits. They shall also carry approved life-belts, or other similar approved articles of equal buoyancy, suitable for being worn on the person, so that there may be at least one for each person on board the ship.

(g) Provided, nevertheless, that no ship of this class shall be required to carry more boats or rafts than will furnish sufficient accommodation for all persons on board.

DIVISION (A).—CLASS 2.

Ships in this Class shall be subject to the same requirements as those in Division (A), Class 1.

DIVISION (A).—CLASS 3.—*Rules for steamships having passenger certificates under the "Merchant Shipping Acts," authorising them to carry passengers anywhere within the Home Trade Limits, that is to say between places in the United Kingdom, or between the United Kingdom and ports in Europe between the River Elbe and Brest.*

(a) Ships in this Class shall carry boats placed under davits in accordance with the rules and table provided for ships in Division (A), Class 1.

(b) If the boats placed under davits in accordance with this requirement do not furnish sufficient accommodation for all persons on board, then additional wood, metal, collapsible, or other boats of approved description (whether placed under davits or otherwise), or approved life-rafts, shall be carried of at least such cubical capacity that they and the boats required to be placed under davits by Table (c) provide together in the aggregate one-half more than the minimum cubic contents provided by column 3 of that Table.

(c) Provided that if (having regard to the avoidance of undue incumbrance of the ship's deck, and to the safety of the ship for her voyage) it is not practicable for any ship of this Class to carry all the additional approved boats or approved life-rafts required by the preceding sub-section (b), the deficiency so caused may be made up by the supply of an equivalent number of approved buoyant deck seats or other approved buoyant deck fittings.

(d) Ships of this Class shall carry not less than six approved life-buoys.

(e) They shall also carry, in addition to the boats and appliances required above, approved life-belts or other similar approved articles of equal buoyancy suitable for being worn on the person, so that there may be at least one for each person on board the ship.

(f) Provided nevertheless that no ship of this Class shall be required to carry more boats, rafts, and other buoyant deck fittings than will furnish sufficient accommodation for all persons on board.

DIVISION (B).—CLASS 1.—*Rules for sailing ships carrying Emigrant Passengers subject to all the provisions of the "Passengers Acts."*

(a) Ships of Division B, Class 1, shall carry boats in accordance with the Table (c) provided for Division A, Class 1, and such boats shall be, as far as practicable, placed under davits, with proper appliances for getting them into the water. All boats not placed under davits are to be so carried that they can be readily got into the water.

(b) If the boats so carried do not furnish sufficient accommodation for all persons on board, then additional life-saving appliances shall be supplied as for ships in Division (A), Class 1.

(c) Provided that no ship in this Class shall be required to carry more boats or rafts than will furnish accommodation for all persons on board.

(d) Approved life-belts or other similar approved articles shall be carried as required for ships of Division (A), Class 1, and also one life-buoy for each boat of wood or metal.

DIVISION (B).—CLASS 2.—*Rules for Foreign-going sailing ships carrying passengers but not subject to all the provisions of the "Passengers Acts."*

Ships of this Class shall be subject to the same requirements as those in Division (B), Class 1.

DIVISION (B).—CLASS 3.—*Rules for Foreign-going sailing ships not carrying passengers.*

(a) Ships of this Class shall carry a boat or boats of Sections A or B sufficient for all the persons on board, and in addition thereto one good serviceable boat of Section (D). Such boats shall be, as far as practicable, placed under davits, with proper appliances for getting them into the water; all boats not placed under davits are to be so carried that they can readily be got into the water to the satisfaction of the Board of Trade officer.

(b) They shall carry approved life-belts as required for ships in Division (B), Class 1, and also one life-buoy for each boat of wood or metal.

DIVISION (B).—CLASS 4.—*Rules for Foreign-going steamships not certified to carry passengers.*

(a) Ships of this Class shall carry, on each side, at least so many and such boats of wood or metal placed under davits (of which one

on one side shall be a boat of Section (A) or Section (B), and on the other side shall be a boat of Section (A), or Section (B), or Section (C), that the boats on each side of the ship shall be sufficient to accommodate all persons on board. They shall have proper appliances for getting the boats into the water.

(b) They shall carry approved life-belts as required for ships of Division (B), Class 1.

(c) They shall carry not less than six approved life-buoys.

DIVISION (C).—CLASS 1.—*Rules for steamships not certified to carry passengers plying anywhere within the Home Trade Limits.*

(a) Ships of this Class shall carry, on each side, at least so many and such boats of wood or metal placed under davits (of which one on each side shall be a boat of Section (A), or of Section (B), or of Section (C), that the boats on each side of the ship shall be sufficient to accommodate all persons on board. They shall have proper appliances for getting the boats into the water.

(b) They shall also carry approved life-belts so that there may be at least one for each person carried on board the ship.

(c) They shall also carry not less than four approved life-buoys.

DIVISION (C).—CLASS 2.—*Rules for sailing ships in the same trades not carrying passengers.*

(a) Ships of this Class shall carry a boat or boats of wood or metal, at least sufficient for all persons on board, and in such a position as to be readily got into the water. Each boat shall be provided with one gallon of vegetable or animal oil and a vessel of an approved pattern for distributing it in the water in rough weather.

(b) Ships of this Class shall also carry an approved life-belt for each person on board.

(c) They shall also carry at least two approved life-buoys.

DIVISION (D).—CLASS 1.—*Rules for steamships having passenger certificates authorising them to carry passengers within certain specified limits of the Home Trade, that is to say, on short specified passages along the coasts of the United Kingdom, or between Great Britain and Ireland, or between Great Britain or Ireland and the Isle of Man.*

(a) Ships of this Class shall, according to their tonnage, carry boats placed under davits, as required by the Table for ships in Division (A), Class 1, but all such boats as are not required to be of Sections (A) or (B), must be of Section (C).

(b) If the boats placed under davits in accordance with the above requirements do not furnish sufficient accommodation for all persons on board, then additional wood, metal, collapsible, or other boats of approved description (whether placed under davits or otherwise), or approved life-rafts, shall be carried of at least such cubical capacity that they and the boats required to be placed under davits by Table (c) provide together in the aggregate one-half more than the minimum cubic contents provided by column 3 of that Table. For this purpose 3 cubic feet of air case in the life-raft is to be estimated as 10 cubic feet of internal capacity; provided always that the rafts will accommodate the persons for which they are certified under the rules.

(c) Provided that if (having regard to the avoidance of undue incumbrance of the ship's deck, and to the safety of the ship for her voyage) it is not practicable for any ship of this Class to carry all

the additional approved boats or approved life-rafts required by the preceding sub-section (b), the deficiency so caused may be made up by the supply of an equivalent number of approved buoyant deck seats or other approved buoyant deck fittings.

(d) Ships of this Class shall also carry approved life-belts or other similar approved articles of equal buoyancy suitable for being worn on the person, so that there may be at least one for each person on board the ship.

(e) At least one approved life-buoy shall also be provided for each boat of wood or metal carried by the ship, but in no case shall less than six approved life-buoys be provided.

(f) Provided nevertheless that no ship of this Class shall be required to carry more boats, rafts, and other buoyant deck fittings than will furnish sufficient accommodation for all persons on board.

DIVISION (D).—CLASS 2.—*Rules for steamships carrying passengers on short excursions or pleasure trips to sea, or in estuaries, or mouths of rivers during daylight.*

(a) Ships of this Class shall carry at least two boats of Section (A), or Section (B), or Section (C), placed under davits, and with proper appliances for getting them into the water.

(b) They shall also carry other boats, approved buoyant apparatus and (or) approved life-belts sufficient (with the boats required by paragraph (a),) to keep afloat all the persons on board the ship.

(c) At least four approved life-buoys shall be carried.

DIVISION (D).—CLASS 3.—*Rules for steamships carrying passengers on rivers and (or) lakes, but not going to sea, or into rough waters.*

(a) Ships of this Class shall carry one boat in such a position that she can readily be got into the water. They shall also carry approved buoyant apparatus or approved life-belts and approved life-buoys at least sufficient, together with the boat, to keep afloat all persons carried on board.

(b) At least four approved life-buoys shall be carried.

Note.—A discretion may be exercised by the Board of Trade to relieve steam launches, steamers plying in narrow waters, and ferry boats, from the operation of the whole or part of Rule (a) of this Class.

GENERAL RULES.

(1) **BOATS.**—All boats shall be constructed and properly equipped as provided by these Rules, and all boats and other life-saving appliances are to be kept ready for use to the satisfaction of the Board of Trade. Internal buoyancy apparatus may be constructed of wood, or of copper or yellow metal of not less than 18 oz. to the superficial foot or of other durable material.

Section (A).—A boat of this section shall be a lifeboat, of whale-boat form, properly constructed of wood or metal, having for every 10 cubic feet of her capacity computed as in Rule (2) at least 1 cubic foot of strong and serviceable enclosed air-tight compartments, so constructed that water cannot find its way into them.

Section (B).—A boat of this section shall be a lifeboat of whale-boat form, properly constructed of wood or metal, having inside and outside buoyancy apparatus, together equal in efficiency to the buoyancy apparatus provided for a boat of Section (A). At least one-half of the buoyancy apparatus must be attached to the outside of the boat.

Section (C).—A boat of this section shall be a lifeboat properly constructed of wood or metal, having some buoyancy apparatus attached to the inside and (or) outside of the boat equal in efficiency to one-half of the buoyancy apparatus provided for a boat of Section (A) or Section (B). At least one-half of the buoyancy apparatus must be attached to the outside of the boat.

Section (D).—A boat of this section shall be a properly constructed boat of wood or metal.

Section (E).—A boat of this section shall be a boat of approved construction, form, and material, and may be collapsible.

(2) CUBIC CAPACITY.—The cubic capacity of a boat shall be deemed to be her cubic capacity, ascertained (as in measuring ships for tonnage capacity) by Stirling's rule ; but as the application of that rule entails much labour, the following simple plan, which is approximately accurate, may be adopted for general purposes, and when no question requiring absolute correct adjustment is raised :— Measure the length and breadth outside and depth inside. Multiply them together and by '6 ; the product is the capacity of the boat in cubic feet. Thus a boat 28 ft. long, 8 ft. 6 in. broad, and 3 ft. 6 in. deep, will be regarded as having a capacity of $28 \times 8.5 \times 3.5 \times .6 = 499.8$, or 500 cubic feet. If the oars are pulled in rowlocks, the bottom of the rowlock is to be considered the gunwale of the boat for ascertaining her depth.

(3) NUMBER OF PERSONS FOR BOATS.—The number of persons a boat of Section (A) shall be deemed fit to carry shall be the number of cubic feet ascertained as in Rule (2) divided by 10.

The number of persons a boat of Section (B), (C), (D), or (E), shall be deemed fit to carry shall be the number of cubic feet ascertained as in Rule (2) divided by 8. The space in the boat shall be sufficient for the seating of the persons carried in it, and for the proper use of the oars.

(4) APPLIANCES FOR LOWERING BOATS.—Appliances for getting a boat into the water must fulfil the following conditions :—Means are to be provided for speedily, but not necessarily simultaneously or automatically, detaching the boats from the lower blocks of the davit tackles ; the boats placed under davits are to be attached to the davit tackles and kept ready for service ; the davits are to be strong enough and so spaced that the boats can be swung out with facility ; the points of attachment of the boats to the davits are to be sufficiently away from the ends of the boats to ensure their being easily swung clear of the davits ; the boats' chocks are to be such as can be expeditiously removed ; the davits, falls, blocks, eye-bolts, rings, and the whole of the tackling are to be of sufficient strength ; the boat's falls are to be long enough to lower the boat into the water with safety when the vessel is light. The life-lines shall be fitted to the davits and be long enough to reach the water when the vessel is light ; and hooks are not to be attached to the lower tackle blocks.

(5) EQUIPMENTS FOR COLLAPSIBLE OR OTHER BOATS AND FOR LIFE-RAFTS.—In order to be properly equipped each boat shall be provided as follows :—

(a) With the full single-banked complement of oars, and two spare oars.

(b) With two plugs for each plug-hole, attached with lanyards or chains, and one set and a half of thole pins or crutches, attached to the boat by sound lanyards.

(c) With a sea anchor, a baler, a rudder and tiller, or yoke and yoke lines, a painter of sufficient length, and a boat-hook. The rudder and baler to be attached to the boat by sufficiently long lanyards, and kept ready for use. In boats where there may be a difficulty in fitting a rudder a steering oar may be provided instead.

(d) A vessel to be kept filled with fresh water shall be provided for each boat.

(e) Life-rafts shall be fully provided with a suitable approved equipment.

(6) ADDITIONAL EQUIPMENTS FOR BOATS OF SECTION (A) AND SECTION (B).—In order to be properly equipped, each boat of Sections (A) and (B), in addition to being provided with all the requisites laid down in Rule (5), shall be equipped as follows, but not more than four boats in any one ship require to have this outfit:—

(a) With two hatchets or tomahawks, one to be kept in each end of the boat, and to be attached to the boat by a lanyard.

(b) With a mast or masts, and with at least one good sail, and proper gear for each.

(c) With a line becketed round the outside of the boat and securely made fast.

(d) With an efficient compass.

(e) With one gallon of vegetable or animal oil, and a vessel of an approved pattern, for distributing it in the water in rough weather.

(f) With a lantern trimmed, with oil in its receiver sufficient to burn eight hours.

(7) NUMBER OF PERSONS FOR LIFE-RAFTS.—The number of persons that any approved life-raft for use at sea shall be deemed to be capable of carrying, shall be determined with reference to each separate pattern approved by the Board of Trade; provided always, that for every person so carried there shall be at least three cubic feet of strong and serviceable inclosed air-tight compartments, constructed so that water cannot find its way into them. Any approved life-raft of other construction may be used, provided that it has equivalent buoyancy to that herein before described. Every such approved life-raft shall be marked in such a way as to plainly indicate the number of adult persons it can carry.

(8) BUOYANT APPARATUS.—Approved buoyant apparatus shall be deemed sufficient, so far as buoyancy is concerned, for a number of persons, to be ascertained by dividing the number of pounds of iron which it is capable of supporting in fresh water, by 32. Such buoyant apparatus shall not require to be inflated before use, shall be of approved construction, and marked in such a way as plainly to indicate the number of persons for whom it is sufficient.

(9) LIFE BELTS.—An approved life-belt shall mean a belt which does not require to be inflated before use, and which is capable, at least, of floating in the water for 24 hours with 15 lbs. of iron suspended from it. Life-belts are to be cut out 2 in. under the armpits, and fitted so as to remain securely in their place when put on.

(10) LIFE-BUOYS.—An approved life-buoy shall mean either—

(a) A life-buoy built of solid cork, capable of floating in the water for at least 24 hours with 32 lbs. of iron suspended from it; or

(b) A strong life-buoy of any other approved pattern and material, provided that it is capable of floating in the water for at least 24 hours with 32 lbs. of iron suspended from it, and provided also

that it is not stuffed with rushes, cork shavings, or other shavings, or loose granulated cork, or other loose material, and does not require inflation before use.

All life-buoys shall be fitted with beackets securely seized, and not less than two of them shall be fitted with life-lines 15 fathoms in length.

(11) POSITION OF LIFE-BUOYS AND LIFE-BELTS.—All life-buoys and life-belts shall be so placed as to be readily accessible to all persons on board, and so that their position may be known to those for whom they are intended.

(12) WATER-TIGHT COMPARTMENTS.—When ships of any class are divided into efficient water-tight compartments to the satisfaction of the Board of Trade, they shall only be required to carry additional boats, rafts, and other life-saving appliance of one-half of the capacity required by these Rules.

MERCHANT SHIPPING ACT, 1889.

CHAPTER 46.—*Amendment of Shipping Act, 1854, and Acts amending same.*

Section 1. Masters of ships to have same remedies for recovery of disbursements and for liabilities incurred on account of ships as for recovery of wages, and power given to Court adjudicating to investigate accounts, set offs, and counterclaims.

Section 2. Advance Notes legalised to the extent of one month's wages, and Section 2 of the Merchant Seamen (Payment of Wages and Rating) Act, 1880, repealed.

Section 3. Deserters.—Register of seamen who have deserted or failed to join their ships after signing Agreement to be kept at Mercantile Marine Office for inspection of masters.

Section 4. Payment of Wages to British Seamen in foreign money to be made at rate of exchange current at place of payment, notwithstanding anything to contrary in Agreement.

Section 5. Provisions of Merchant Shipping Act, 1854, and Amending Acts shall apply to ships propelled by electricity or other mechanical power.

Section 6. This Act to be cited as "Merchant Shipping Act, 1889," and to be construed as one with Merchant Shipping Act, 1854, and subsequent Acts amending the same.

MERCHANT SHIPPING (TONNAGE) ACT, 1889.

Section 1. In ascertaining register-tonnage no deduction shall be allowed in respect of any space which has not been first included in measurement of ship's tonnage. Repeals in Section 21, paragraph 4, Merchant Shipping Act, 1854, the words "First, that nothing shall be added for a closed-in space solely appropriated to the berthing of the crew, unless such space exceeds one-twentieth of the remaining tonnage of the ship, and in case of such excess, the excess only shall be added." And, secondly, and in Section 22, paragraph 2, of the same Act, the words "Subject to the deduction for a closed-in space appropriated to the crew as mentioned in Rule I.," shall be repealed. This Section is not to apply until after the expiration of five years from the passing of this Act to ships where deductions prohibited have been made before the 10th March, 1889, or to ships the building of which was commenced before that date, and which are registered between that date and the end of 1889, unless in either case before the expiration of the

said five years the vessels are measured or re-measured in accordance with the provisions of this Act ; but this exemption is not to extend to any ship in which the allowance for propelling-power space exceeds 50 per cent. of the gross tonnage.

Section 2. Allowance for engine-room in Steamers.—Space or spaces above crown of engine-room, and above the upper deck framed in and for the machinery or for admission of light and air, shall not be included in propelling-power space, except owner requests the Board of Trade in writing, and shall not be included in pursuance of such request, unless

(a) That portion is first included in measurement of gross-tonnage ; and

(b) A surveyor appointed under Fourth Part of Merchant Shipping Act, 1854, certifies that it is duly constructed, safe, and seaworthy, and cannot be used for any other purpose.

Section 3. Deductions for Navigation Spaces.—The following deductions shall be made in ascertaining register-tonnage in measuring or re-measuring a ship, viz.:—

In Sailing Vessels—any space set apart and used exclusively for storage of sails.

In the case of any Ship—

(1) Any space used exclusively for accommodation of master.

(2) Any space used exclusively for working of the helm, the capstan, and anchor gear, or for keeping charts, signals, and other instruments of navigation. and boatswain's stores ; and

(3) The space occupied by donkey-engine and boiler, if connected with the main pumps of the ship.

These deductions are subject to the following provisions, viz.:—

That Board of Trade Surveyor certifies as to their suitability and efficiency ; that there must be permanently marked over every such space the purpose to which it is to be applied ; and that the deduction on account of space for stowage of sails must not exceed $2\frac{1}{2}$ per cent. of tonnage of ship.

Section 4. Deductions in certain Steamships.—In screw-steamships where an engine-room allowance of 32 per cent. of gross-tonnage has been allowed at time of passing the Act, and which any crew space on deck has not been included in gross tonnage, whether its contents have been deducted therefrom or not, the crew space shall be, on the application of the owner or by direction of the Board of Trade, measured and added to register-tonnage ; and if it appears that with such addition the engine-room does not occupy more than 13 per cent. of the tonnage of the ship, the existing allowance of 32 per cent. shall be continued, notwithstanding anything in this Act.

Section 5. Measurement of Ships with Double Bottoms for Water Ballast.—If the spaces between the inner and outer plating is certified by Board of Trade surveyor to be not available for cargo stores or fuel, then depth required by Section 21, paragraph 2, of Merchant Shipping Act, 1854, shall be taken to be the upper side of inner plating of double bottom, which is to be deemed the floor-timber referred to in that section.

Section 6.—Re-measurement of Foreign Ships.—Where tonnage of any foreign ship materially differs from that which would be her

tonnage under the Merchant Shipping Act, 1854, and Amending Acts, Her Majesty may by Order in Council direct that such ships may be remeasured in accordance with those Acts.

Section 7. That this Act be cited as the Merchant Shipping (Tonnage) Act, 1889, and be construed as one with the Merchant Shipping Acts, 1854, and the Acts amending the same.

THE MERCHANT SHIPPING (COLOURS) ACT, 1889.

Section 1. Red ensign usually worn by merchant ships is hereby declared to be the proper national colours for all ships and boats belonging to any subject of Her Majesty, except in the case of Her Majesty's or other ships allowed to wear other colours by Royal Warrant or by Admiralty.

Section 2. A ship belonging to any subject of Her Majesty shall, on a signal from one of Her Majesty's ships, and on entering or leaving any foreign port, and if of 50 tons gross or upwards, shall also, on entering or leaving any British port, hoist the proper national colours, under a penalty from the master of one hundred pounds. Sea-fishing boats registered under the Sea Fisheries Acts are exempted from this provision.

Section 3. Amendment of Section 105 of the Merchant Shipping Act, 1854.—Penalties incurred in respect of the improper hoisting of colours or of a pendant in British ships, with costs, may be recovered in Superior Courts in England, Ireland, or Scotland. Any offence mentioned in that section may also be prosecuted and penalty recovered as in the case of offences declared by Merchant Shipping Act, 1854, punishable by penalties not exceeding £100.

Section 4. Defines "one of Her Majesty's ships" as a vessel under command of an officer of Her Majesty's Navy on full pay.

Sections 5 and 6. Saving Admiralty powers in respect of red ensign usually worn by Merchant Ships, and citing this Act as the "Merchant Shipping (Colours) Act, 1889."

MERCHANT SHIPPING (PILOTAGE) ACT, 1889.

Section 1. Application of Part 5, Merchant Shipping Act, 1854.—To remove doubts as to application of provisions in construction of that Act, the expression "ship" includes a foreign ship.

Section 2. Provisional Orders.—Board of Trade granted power to make provision for direct representation of pilots and shipowners on local pilotage authorities or any body appointed by local authority; and to extend limits of any pilotage district by including area where no pilotage authority exists, so however that in no area thus added there shall be no compulsory pilotage and no restriction on duly qualified persons to obtain licences as pilots; and applies provisions of Section 40, Merchant Shipping Act Amendment Act, 1862, to provisional orders made hereunder.

Section 3. Powers of Committee, Commissioners, Sub-Commissioners, &c.—Powers given to those bodies to suspend, dismiss, or revoke certificates of pilots licensed for districts, and guilty of offences under Sections 365, 366, or 367 of Merchant Shipping Act, 1854.

Section 4. Appeals from Pilotage Authorities.—Pilots aggrieved by decisions of pilotage authorities with respect to suspension or dismissal or revocation, or by imposition of fine exceeding £2, or

to application of any fund to which he has contributed, may appeal to County Court in jurisdiction, or to a police or stipendiary magistrate having jurisdiction within the port. On hearing appeals assessor of nautical and pilotage experience to sit with magistrate.

Provision as to selection and summoning of assessor ; power of judge or magistrate to confirm, reverse, or modify penalty. Costs of pilotage authority payable out of its general funds or expenses. Rules regarding procedure to be made by County Court Judges and Secretary of State.

Section 5. Employment of Unqualified Pilots.—For employing unqualified pilot, after qualified pilot has offered to take charge, a master incurs a penalty of double amount of pilotage demandable for conduct of ship where same is being navigated outside a district in which pilotage is compulsory.

Section 6. Returns as to Pension Fund to be made in manner prescribed by local pilotage authorities to Board of Trade.

Section 7. Bye-laws as to Contributions to Pilotage Funds.—Powers of Section 333 of Merchant Shipping Act, 1854, shall extend to making bye-laws compelling masters and mates to contribute to Pilotage Funds, with provision as to limit of contributions.

Section 8. Application of Fees in respect of Pilotage Certificates.—To be applied to expenses incidental to examinations under Section 343 of the Merchant Shipping Act, 1854, and surplus to go to local superannuation fund of pilots, &c.

Section 9. Flag to be Displayed where Master or a Mate has a Pilotage Certificate.—To be displayed of description mentioned in Section 346 of Merchant Shipping Act, 1854 ; and failure to comply entails a penalty on master of £20. Holder of such a pilotage certificate is deemed a qualified pilot under Section 348, Merchant Shipping Act, 1854.

Section 10. Penalty on Ordinary Boat displaying Colourable Imitation of Pilot Flag.—Enacted that boats or ships not having on board licensed pilots displaying flags likely to deceive, be deemed an offence by master or owner, entailing a penalty of £50.

Section 11. Recovery of Pilotage Dues.—Repeals Section 363 of Merchant Shipping Act, 1854, in so far as it enacts that pilotage dues shall not be recovered until dues so demanded have remained unpaid for seven days after time of demand.

Section 12. Application to Scotland.—Act applies with following modifications :—

Appeals under Act from pilotage authority shall be made to sheriff having jurisdiction.

Court of Session to make rules as to procedure in appeals.

Section 13. Application to Ireland.—Courts defined where appeals may be heard, and rules as to legal procedure.

Section 14. Repeals enactments defined in Schedule, which sets out certain words in Section 343 of Merchant Shipping Act, 1854, hereby repealed, as also certain words in Section 363 of same Act.

Section 15. Construction of Act—as one with Part V. of Merchant Shipping Act, 1854.

Section 16. Commencement of Act—To come into operation on 1st January, 1890.

Section 17. Short Titles.—Act to be called "Merchant Shipping (Pilotage) Act, 1889."

THE MERCHANT SHIPPING ACT 1890 (COMMONLY KNOWN AS
THE LOADLINE ACT).

Act became Law. 9th June, 1890.

Compulsory Marking of Loadline.—Section 1. —That Merchant Shipping Act, 1876, shall, after the expiration of six months from passing of this Act, be construed as if in the 26th and 27th sections thereof, the following sub-section were inserted instead of the sub-sections numbered (2) in those sections respectively :—

(2) The centre of this disc shall be placed at such level below the deckline marked under the provisions of this Act, as may be approved by the Board of Trade, and shall indicate maximum loadline in salt water to which it shall be lawful to load ship.

Provided that position of this disc shall be fixed in accordance with tables framed by the Loadline Committee, appointed before passing of this Act, subject to such allowance necessary by difference between position of deckline marked under the provisions of the Merchant Shipping Act, 1876, and the position of the line from which freeboard is measured under the said tables, and subject to any modification subsequently sanctioned by Board of Trade,

In sanctioning modifications, Board of Trade have regard to representations made by any Corporation or Association, for survey or register of shipping for the time appointed or approved for the purposes of this Act.

Regulations.—Section 2.—Board of Trade shall appoint the Committee of Lloyd's Register of British and Foreign Shipping, or at option of owner of ship, any other Corporation or Association approved by Board of Trade, to approve and certify on their behalf from time to time the position of any disc, and any alteration thereof, and may appoint fees to be taken in respect of any such approval or certificate.

Board of Trade may make regulations :—

(a) Determining lines or marks to be used in connection with the disc, in order to indicate maximum loadline under different circumstances and at different seasons.

(b) As to mode in which the disc and the lines or marks are to be marked on the ship, whether by painting, cutting, or otherwise.

(c) As to mode of application for and form of certificates under this Act ; and

(d) Requiring the entry of such certificates, and other particulars as to draught of water and freeboard in the official log-book of the ship, or other publication on board, and as to delivering copies of such entries.

All such regulations to be in full force and effect.

Colonial Ships.—Section 3.—Where legislature of any British possession by enactment provides for the fixing, marking, and certifying of loadlines on ships registered in that possession, and it appears that such provisions are based on the same principles as the provisions of this Act, it shall be lawful for Her Majesty, by order in Council, to declare that any load-line fixed and marked, and any

certificate given in pursuance of that enactment, shall, with respect to such ships have the same effect as if issued in pursuance of this Act.

Sections 1 and 2 of *this* Act, shall not apply in the case of a ship registered in a British possession until the expiration of 12 months after passing hereof.

Provision as to Foreign Ships.—Section 4.—Where Board of Trade certify that the laws and regulations for the time being in force, in any foreign state, respecting overloading and improper loading are equally effective with provisions of the Merchant Shipping Acts, Her Majesty, by order in Council, may direct that on proof of a ship of that state having complied with those laws and regulations, she shall not, when in a port of the United Kingdom, be liable to detention for non-compliance with the said provisions of the Merchant Shipping Acts. This section is not to apply in the case of ships of any foreign country in which corresponding provisions are not extended to British ships.

Definition of Amidships.—Section 5.—For the purposes of the Merchant Shipping Act, 1876, as amended by this Act, the expression "amidships" shall mean the middle of the length of the load water-line, as measured from the fore side of the stem to the aft side of the stern post.

BOARD OF TRADE REGULATIONS.

Advance Notes.—Advance notes are now made illegal where exceeding one month's wages (see Section 2, Merchant Shipping Act, 1889, chapter 46). No deduction can be made against wages on account of such notes. Advances in cash, or through medium of advance notes not exceeding one month's wages, may be made and entered on the agreement.

Allotment Notes.—A seaman may insist on a stipulation in the agreement for the allotment of any part, not exceeding half, of his wages in favour of a relative (see Section 169, Merchant Shipping Act, 1854, and Section 3, Merchant Shipping Act, 1880). The allotment may be made in favour of the seamen's savings bank, and paid into his account. The first payment to relatives or other persons shall begin at the end of a month, except in the case of a savings bank, when the first payment is made at the end of three months from signing agreement. Subsequent payments shall be made as agreed upon and stated in allotment note. Allotments issued to non-relatives cannot be recovered summarily at law. Remittances of allotment money may be paid by owners and agents to the relatives of seamen by means of seamen's money orders free of expense. Allotment forms may be had at the Mercantile Marine Office.

Discharge of Crews.—(See Section 187, Merchant Shipping Act, 1854, and Section 4, Merchant Shipping Act, 1880.)—The crews of foreign-going ships must be discharged and their wages paid at the Mercantile Marine Office. The wages must be paid within two days after the seamen leave the ship, exclusive of any Sunday or Bank Holiday. Each seaman is entitled on leaving ship to £2, or

one-fourth of balance due to him, whichever is least. Twenty-four hours' notice of the time of discharging crew must be given at Mercantile Marine Office. The official log book and articles of agreement must be delivered to the superintendent within forty-eight hours after ship's arrival, or upon discharge of the crew. On the completion of the discharge the master will receive the inward clearance, or BB certificate. The wages of seamen absent at the time of paying off may be deposited at the Mercantile Marine Office. Seamen may be discharged on board on application at a fee of 1s. for each man, payable by master or owner.

Deceased Seamen's Wages and Effects.—Masters are bound within 48 hours of the arrival of any foreign-going or home trade ship in the United Kingdom to deliver to the Superintendent of the Mercantile Marine Office the wages and effects of any seaman or apprentice who has died during the voyage, together with a proper account of same on the prescribed form, which may be obtained at that office. Even should no balance be due to seaman, the account must still be made out, and the fact shown thereon. Deduction for funeral, hospital, or medical expenses cannot be made where seamen have died from injuries received in service of the ship. Claims to the wages and effects of deceased seamen must be made by the relatives or next-of-kin on forms to be had at the Mercantile Marine Offices. Letters of administration or probate will be required where the amount of the wages exceeds £50.

Engagement of Crews.—Six hours' notice of time of engagement of crews for foreign-going ships must be given at Mercantile Marine Office. Individual engagements or discharges of members of crew on running agreements must also take place at Mercantile Marine Offices. For certificates of the necessary officers, which must be produced at time of engagement, see Section 136, Merchant Shipping Act, 1854, and Section 5, Merchant Shipping Act, 1862, herein. Seamen may be engaged on board on application at a fee of 1s. for each man engaged, payable by master or owner.

Surveys, Passenger Steamer Certificates and Surveys, Suez Canal Certificates, &c.—Every British steamship (not being a steam ferry boat working in chains) carrying more than 12 persons (other than the master, the crew, and the owner, his family, and servants), plying between any place or places in the United Kingdom, is, at stated periods, to be surveyed by persons appointed by the Board of Trade, and a certificate of such survey will be granted to the master or owner, without which such steamship will be unable (legally) to ply on any voyage or excursion. For these certificates of surveys the necessary forms must be filled up, and the fees paid thereon, at a Mercantile Marine Office. The same rules which apply to British passenger steamers also apply to foreign steamers when employed in carrying passengers between places in the United Kingdom.

The scale of fees for surveys of steamships for passenger certificates is :—100 reg. tons and under £4 ; over 100 and not ex. 300, £6 ; over 300 and under 900, £8 ; 900 and under 1,200, £10 ; 1,200 and under 1,500, £12 ; 1,500 and under 1,800, £14 ; 1,800 and under 2,100, £16 ; 2,100 and under 2,400, £18 ; and £2 for every additional 300 tons. The scale is for 12 months. For 6 months 6-12ths of the fee will be charged, for 9 months 9-12ths, and so on, at the rate of 1-12th for each month ; but no fee is to be

less in amount than 3-12ths. In all cases of *new* steamships coming under survey for a passenger certificate *for the first time*, a full 12 months' fee must be paid, notwithstanding that a certificate for 12 months may not be required, and in no case of an incomplete declaration will less than 3-12ths be charged. Measurement of tonnage fees:—Under 50 reg. tons £1; 50 to 100, £1 10s; 100 to 200, £2; 200 to 500, £3; 500 to 800, £4; 800 to 1,200, £5; 1,200 to 2,000, £6; 2,000 to 3,000, £7; 3,000 to 4,000, £8; 4,000 to 5,000, £9; 5,000 and upwards, £10. A table of fees payable on miscellaneous surveys, change of name, inspection of boiler, tracings, &c., may be had at any Mercantile Marine Office, where all fees are payable.

CUSTOMS REGULATIONS AND CLEARANCE OF SHIPS.

If inward cargo be reported for exportation, a copy of report must be delivered to searcher under penalty.

Ships' Content.—This document containing particulars as to cargo and voyage with declaration attached must be delivered to Collector before clearance outwards.

Victualling Bill.—When duly signed by Collector or other proper Officer of Customs shall be the clearance and authority for departure of ship. Master of vessel outwards, in which goods are to be taken from United Kingdom to parts beyond the sea, must, before taking any goods on board, deliver to the Collector the inward clearance and enter outwards. Ships clearing foreign putting back to United Kingdom in distress or otherwise. Penalty provided against excessive deficiency in stores, having regard to the length of time between departure and return. Penalty on departing without being cleared, £100.

Clearing in Ballast.—Ships not having any goods on board except stores borne upon the Victualling Bill, may be cleared in ballast. Vessels carrying passengers, and vessels laden with chalk to extent of more than one-third of their registered tonnage are chargeable with light dues.

Documents to be produced at Clearance.—For a British ship:—The register with the master's name endorsed thereon. The outward lights receipt. The AA certificate if engaged in foreign trade or CC certificate if in the home trade. NOTE.—Colonial ships are subject to the same laws as those of the United Kingdom, excepting when bound to their own colony where the voyage is to terminate, in which case such ships can proceed without certificated master and officers. For a foreign ship:—The measurement certificate, excepting for vessels belonging to countries which have adopted the British system of measurement. NOTE.—The measurement certificate is only valid for three years from the date thereof. On the production of these documents the clearance label is signed and returned to master.

Vessel carrying Passengers.—If proceeding to ports out of Europe, Mediterranean ports excepted, duplicate Passenger Lists must be furnished. Masters of British sailing ships carrying passengers must make the declaration that the vessel is furnished with the necessary number of boats under the Merchant Shipping Act.

Boat declaration not required from British passenger steamers, but production of Passenger Certificate necessary.

Ships under Passengers' Act must in addition have a bond executed in duplicate before the Clearing Officer by master and owner or charterer.

Outward Pilotage.—For foreign vessels going beyond Brest the receipt for outward pilotage must be produced.

Bills of Health are issued at the clearing seat when required.

Coasting Trade Defined.—All trade by sea from any one part of the United Kingdom to another shall be deemed to be coasting trade. Penalty for coasting ship deviating from coasting voyage unless forced by unavoidable circumstances. Goods brought coastwise may be entered outwards without landing if not liable to duty.

Cargo Books must be kept by masters in the coasting trade under penalty. Transire and duplicate containing the necessary particulars signed by the master shall, in the coasting trade, before departure of vessel be delivered to the collector, who retains the duplicate and returns the original duly signed by him. This account shall be the outward clearance of the ship and the transire or pass for the goods therein.

Transires of Foreign Vessels.—Before issue of transire the agent applying for same is to produce a declaration made by the master showing the vessel's nationality.

COMPARISON OF THE DRAUGHT OF FOREIGN VESSELS WITH THE EQUIVALENT DRAUGHT IN ENGLISH FEET.



**COMPARISON OF THE DRAUGHT OF FOREIGN VESSELS
WITH THE EQUIVALENT DRAUGHT IN ENGLISH FEET**
continued.

The Belgian Measure is similar to the French. Large Bremen and Russian Ships are usually marked in English feet; Dutch, Antwerp, and German with Rhineland Measure; Finland with Swedish; and Austrian with Italian Measure. Greek and Italian Lineal Measure are similar to the French.




COMPARATIVE TABLE OF CLASSIFICATION OF SHIPS.

Classification of Ships.	Lloyd's Register.	Bureau Veritas.	Austrian Lloyds.	Italian Register.
1st Class.				
1st Grade, 1st Class	A 1	$\frac{3}{4}$ 11	A 11	100 11
and " "	red A 1	$\frac{3}{4}$ 11	B 11	0,85 11
3rd " "	\mathcal{A} 1	$\left\{ \frac{3}{4} 21 \right.$	B 11 1	0,85 11 1
		$\left\{ \frac{1}{2} 31 \right.$	C 11 1	0,75 11 1
2nd Class.				
1st Grade, 2nd Class	E	$\frac{3}{4}$ 3 2	C 11 11	0,65 111 11
and " "	I	$\frac{3}{4}$ 3 2	L 11 11	0,50 111 11

COMPARATIVE TABLE OF CLASSIFICATION OF SHIPS—*continued.*

Classification of Ships.	Norwegian Register.	American Register.	German Lloyds.	Netherlands Register.	Registre Internationale.
1st Class.					
1st Grade, 1st Class	A 1	{ A 1 A 1 ¹	A I	{ A 1 A 1*	{ 1re C 1* 1re C 2
2nd „ „	A 2 ¹	A 1 ²	A II	{ A 2 A 2*	2e C 1*
3rd „ „	{ A 2 B 1 B 2	{ A 1 ³ A 2	B	{ B 1 B 2	{ 2e C 2* 3e C 1*
2nd Class.					
1st Grade, 2nd Class	C 1	A 2	C L	C	3e C 2*
2nd „ „	C 2	A 2 ³	C K	D	

1 F, 2 F, 3 F, Lloyd's Register Class for foreign vessels *not* constructed according to Lloyd's rules, but surveyed by Lloyd's.

LLOYD'S REGISTER FOR IRON SHIPS AND STEAMERS.— and  subject to survey every 4 years;  every 3 years. The above class was formerly given, the following are now in use:—100 A, 95 A, 90 A, subject to survey every 4 years; 85 A, 80 A, 75 A, every 3 years.

LIVERPOOL IRON BOOK.—Iron ships and steamers are classed in red (for periods varying from 10 to 20 years) that have been inspected by the Liverpool Association Surveyor during construction. Vessels not surveyed as above are classed in black. Twenty years red, survey every 4 years, less than 20 years red, every 3 years; 20 years black, every 4 years, less than 20 years black, every 2 years.

LIGHTS.

Regulations as to Lights to be carried when ships are under way.

SAILING-SHIP.—Green light starboard side; red light port side.

STEAMSHIP.—Green light starboard side; red light port side; white light before foremast, not less than twenty feet, nor less than breadth of ship above hull.

SHIP BEING OVERTAKEN BY ANOTHER SHIP.—White light or flare up at stern.

STEAMER TOWING ANOTHER SHIP.—Green light starboard side; red light port side; two white lights vertically before foremast.

SAILING-SHIP BEING TOWED.—The same as another sailing-ship.

SHIP LAYING OR PICKING UP A TELEGRAPH CABLE.—Three vertical lights before foremast six feet apart, the highest and lowest red, the middle white.

SHIP NOT UNDER COMMAND.—Three vertical red lights before foremast, three feet apart.

PILOT VESSEL ON PILOTAGE DUTIES.—White light at mast-head, and at intervals, not exceeding 15 minutes, a flare up light.

PILOTAGE VESSEL WHEN NOT ON PILOTAGE DUTIES.—The same lights as other ships.

OPEN FISHING AND OTHER OPEN BOATS.—In lieu of side-lights, a lantern, showing green on one side and red on the other, to be exhibited in sufficient time to prevent a collision. They may also use a flare up in addition.

FISHING VESSELS EMPLOYED IN DRIFT NET FISHING OR TRAWLING.—Two white lights from any part of the vessel whence they can best be seen. Lower light to be forward not less than six nor more than ten feet from the higher light. They may also use a flare up in addition. All flare up lights exhibited when trawling, dredging, or fishing, shall be shown from the after part of the vessel, excepting that if the vessel is hanging by the stern to her trawl, dredge, or net, they shall be exhibited from the bow.

Lights ordered to be carried when at anchor.

ALL SHIPS, VESSELS, BOATS AND FISHING VESSELS.—A bright white light.

If a fishing vessel becomes stationary in consequence of her net fouling a rock or other obstruction, she shall show the light and make the fog signals for a vessel at anchor.

BRITISH SHIPS' PAPERS.

THE FOLLOWING ARE THE PAPERS GENERALLY FOUND ON BOARD A MERCHANT VESSEL (UNDER DIFFERENT NATIONALITIES THIS LIST MAY VARY):—

Every merchant vessel should carry on board some official voucher of her nationality, issued by the authorities of the country to which she belongs.

The official voucher of a vessel which belongs to a country possessing a register of its mercantile marine, is a certificate of her Registry: in other cases its form varies, and is called "Passport," "Sea-brief," &c.

The **Certificate of Registry** is a document signed by the registrar of the port to which the vessel belongs, and usually specifies the name of the vessel and such port; her tonnage, &c.; the name of her master; particulars as to her origin; and names and description of her registered owners, &c.

The **Passport** purports to be a requisition on the part of a Sovereign Power or State to suffer the vessel to pass freely with her company, passengers, goods and merchandise without any hindrance, seizure, or molestation, as being owned by citizens or subjects of such State. It usually contains the name and residence of the master; together with the name, description, and destination of the vessel.

The **Sea-letter, or Sea-brief** is issued by the civil authorities of the port where the vessel is fitted out; and it entitles the Master to sail under the flag and pass of the nation to which he belongs; and also specifies the nature and quantity of the cargo, by whom it is owned, and its destination.

The **Charter-party** is the written contract by which a vessel is let, in whole or in part; the person hiring being called the charterer. It is executed by the owner or master, and the charterer.

Amongst other things it usually specifies the name of the master, the name and description of the vessel, the port where she was lying at the time of the execution of the charter, the name and residence of the charterer, the character of the cargo to be put on board, the port of loading, the port of delivery, and the freight which is to be paid.

The **Charter-party** is almost invariably found on board a vessel which has been chartered.

The Official Log-book is the log-book which the master is compelled to keep in the form prescribed by the municipal law of the country to which the vessel belongs.

The Ship's Log is the log kept by the master or mate for the information of the owners of the vessel.

The Builder's Contract is found on board a vessel which has not changed hands since she was built. It sometimes serves, in the absence of the pass or sea-letter or certificate of registry, for verification of a vessel's nationality.

The Bill of Sale is the instrument by which a vessel is transferred to a purchaser. It should be required whenever a sale of a vessel is alleged to have been made either during the war or just previous to its commencement, and if there is any reason to suspect that the vessel is liable to detention, either as an enemy's vessel or as a British or allied vessel trading with the enemy.

Bills of Lading usually accompany each lot of goods.

A Bill of Lading on board a vessel is a duplicate of the document given by the master to the shipper of goods on the occasion of the shipment; it specifies the name of the shipper, the date and place of the shipment, the name and destination of the vessel, the description, quantity, and destination of the goods, and the freights which are to be paid.

The Invoices, which should always accompany the cargo, contain particulars of each parcel of goods, with the amount of the freight, duties, and other charges thereon, and specify the name and address of the shippers and consignees.

The Manifest is a list of the vessel's cargo, containing the mark and number of each separate package, the names of the shippers and consignees; a specification of the quantity of goods contained in each package, as rum, sugar, &c., and also an account of the freight corresponding with the bills of lading. In many cases packages are signed for "contents unknown."

The Manifest is usually signed by the ship-broker who clears the vessel out at the custom-house, and by the master.

The Clearance is the certificate of the custom-house authorities of the last port from where the vessel touched, to show that the custom duties have been paid. The clearance specifies the cargo and its destination.

Shipping Articles are the agreements for hiring seamen. They should be signed by every seaman on board, and should describe accurately the voyage and the terms for which each seaman ships, and specify the provisions to be given.

Crew List and Shipping Articles.—Upon arriving in a foreign country the master of a vessel deposits these papers with the Consul representing the flag which covers the vessel, and takes a receipt therefor: these papers are returned to the master when clearing from his Consul.

The Bill of Health is a certificate that the vessel comes from a place where no contagious distemper prevails, and that none of her crew were infected at the time of her departure, and is endorsed if any sickness was prevalent.

TIME AND KNOT TABLE.

The figure in this
passes over

to the time

which a vessel
in knots.

BRITISH NAVAL SERVICE.

ADMIRALTY OFFICE (£203,400). NAVAL DEPARTMENT.—
Whitehall. Hours 11 to 5.

LORDS COMMISSIONERS (£15,900). FIRST LORD, Right Hon. Lord
G. F. Hamilton, M.P. (with house), £4,500.

NAVAL SECRETARY, Capt. A. T. Dale, £500 (in addition to professional pay).

ASSISTANT SECRETARY AND PRINCIPAL CLERK, Richard D.
Awdry, £1,000.

CONTROLLER OF NAVY, Rear-Admiral John O. Hopkins, £1,700
(in addition to professional pay).

DIRECTOR OF NAVAL CONSTRUCTION, W. H. White, £2,000.

DIRECTOR OF VICTUALLING DEPARTMENT, Henry F. R. Yorke,
£800.

DIRECTOR OF NAVY CONTRACTS, John Collett, £1,200.

MEDICAL DIRECTOR-GENERAL, Sir John W. Reid, K.C.B., M.D.
£1,300.

ACCOUNTANT-GENERAL AND COMPTROLLER NAVY PAY, Sir
Gerald FitzGerald, K.C.M.G., £1,500.

DIRECTOR OF TRANSPORTS, Captain Harry W. Brent, £1,900.

DIRECTOR OF WORKS, Colonel Percy G. L. Smith, R.E., £1,300.

HYDROGRAPHER, Captain William J. L. Wharton, F.R.S., £1,000.

SUPERINTENDENT OF NAVAL RESERVES, Rear-Admiral Sir
George Tryon, K.C.B., £1,596.

THE BOARD OF TRADE.

ORGANISATION AND DIVISION OF LABOUR.

IN the Civil Service, the Board of Trade, over which Sir Michael Hicks Beach at present presides, is usually termed the "Big Board," more because of the numerous matters dealt with by the Board than from the large number of members—nominal for the most part—of which it really consists. The Board practically consists of the president, the permanent secretary (Sir H. G. Calcraft, C.B.), and an assistant secretary attached to the Marine Department, Finance Department, Harbour Department, Railway Department, Statistical Department, and Fisheries Department respectively.

Marine Department.

(Assistant Secretary, Mr. GEORGE J. SWANSTON, C.B.)

SUBJECTS.—Admiralty Courts. Albert Medal. Chains, Cables, and Anchors Act. Crew Spaces. Discipline. Distressed Seamen, Relief of (Rules and Principles). Examinations of Masters, Mates, and Engineers. International Code of Signals. International Questions concerning Shipping. Life-Saving Apparatus. Lights and Fog Signals. Lime and Lemon Juice, and Anti-Scorbutics. Medical Scale for

Merchant Ships. Mercantile Marine Offices and Local Marine Boards. Misconduct, Inquiries into. Naval Reserve. Passenger Ships, Survey of. Rewards for Saving Life. Tonnage, Measurement of. Training Ships. Unseaworthy Ships. Wrecks and Casualties, Inquiries into. Wreck Register.

Finance Department.

(Assistant Secretary, Mr. ALLEN STONEHAM.)

SUBJECTS.—Accounts and Estimates of all Departments of the Board of Trade. Accounts of Lighthouse Boards. Accounts of Consuls and Colonial Shipping Masters, including Accounts of Relief of Distressed Seamen. Accounts of Superintendents and Receivers of Wreck. Claims on Owners of Vessels. Greenwich Sixpences Fund. Life Assurance Companies Returns. Merchant Seamen's Fund (Pensioners'). Money Orders. Pensions. Greenwich Hospital Fund. Seamen's Savings Banks. Seamen's Temporary Deposit Bank (Liverpool). Wages and Effects of Deceased Seamen.

Harbour Department.

(Assistant Secretary, Mr. CECIL TREVOR, C.B.)

SUBJECTS.—Average. Explosives Act. Fisheries. Fore-shores. Freight. Harbours. Liability of Shipowners. Lighthouses and fixed Fog-signals. Loans to Harbour Authorities. Local Charges on Shipping. Pilotage. Protection of Navigable Channels, Ports, &c. Provisional Orders, Piers and Harbours. Provisional Orders, Oyster and Mussel Fisheries. Quarantine. Registration of Ships. Standards. Suez Canal. Tidal Waters, Wreck and Salvage.

Railway Department.

(Assistant Secretary, Mr. E. COURTENAY BOYLE, C.B.)

SUBJECTS.—Alkali Act. Art Unions. Charters. Copyright and Trade Marks. Gas Companies. Industrial Exhibitions Act. Joint Stock Companies. Partnerships. Railways. Registry of Designs. Telegraphs and Electric Lighting.

Statistical or Commercial Department.

(Assistant Secretary, Mr. R. GIFFEN.)

SUBJECTS.—Statistics generally, and Corn Returns.

Fisheries Department.

(Assistant Secretary, Mr. ARTHUR D. DERRINGTON.)

SUBJECTS.—Administration of Merchant Shipping (Fishing Boats) Act, 1883, &c. and other matters relating to the Sea Fishing Service.

Bankruptcy Department.

Inspector-General in Bankruptcy, Mr. JOHN SMITH.

Chief Official Receiver, Mr. R. P. HARDING.

SUBJECTS.—General Administration of Bankruptcy Act, and regulations and procedure thereunder.

*General Registry and Record Office of Shipping and Seamen,
Custom House, London, E.C.*(Registrar-General of Shipping and Seamen,
Mr. J. CLARK HALL.)

SUBJECTS.—Transcripts of Registers of British Ships. Ownership and Mortgages, &c. Custodian of Agreements with Crews. Official Logs. Apprentices' Indentures. Certificates of Masters, Mates, and Engineers, Royal Naval Reserve.

TABLE OF CONSULAR FEES.

(Consular Fees Order in Council, 1888.)	General.	China and Japan.
	£ s. d.	Dols. Cents.
For Declaration to register, transfer, and transmission of ships, &c.....	0 5 0	1 0
„ Endorsing change of master upon register.....	0 4 0	0 50
„ Recording mortgage of ship or shares.....	1 0 0	2 50
„ Recording the transfer of „ „	1 0 0	1 50
„ Recording discharge of „ „	1 0 0	2 0
„ Every sale of „ „	1 0 0	2 50
„ Inspection of ship's register.....	0 1 0	0 25
„ Every seaman engaged	0 2 0	0 50
„ Alteration in shipping agreements	0 2 0	0 50
„ Every seaman discharged or left behind.....	0 2 0	0 50
„ Every desertion.....	0 2 0	0 50
„ Attesting a seaman's will.....	0 2 0	0 50
„ Examination of provisions or water.....	0 10 0	2 50
On Disbursements for distressed seamen, Commission $2\frac{1}{2}$ per cent.		
For Noting protest	0 7 6	1 0
„ Order of survey.....	0 10 0	1 0
„ Extending protest or survey	1 0 0	5 0
And if over 200 words, for every 100 words plus. ...	0 2 6	0 50
For attendance, out of Consular Office, for ship, &c., over and above travelling ex., per diem	2 0 0	5 0
„ Attending valuation of goods, if less than 2 hours	1 0 0	2 50
Do. for each additional hour 10/- with maximum per day	4 4 0	5 0
Do. Maximum.....	4 4 0	5 0
For attending sale	2 2 0	10 0
Certificate of landing.....	0 10 0	2 0
Bill of health	0 10 0	2 50

HER MAJESTY'S CONSULAR OFFICERS.

A. and C.G., Agent and Consul-General. C.G., Consul-General. C., Consul.
V.C., Vice-Consul.

AFRICA (East Coast).

Somali Coast, Lt.-Col. F. M. Hunter,
C.B., C.
Berbera, L. P. Walsh, V.C. (see also
Zanzibar).

V.C.
C.

AFRICA (West Coast).

Old Calabar, &c., E. H. Hewett,
C.M.G., C.
Bonny, J. Munro, C.A.
Old Calabar, A. Gillies, C.A.
Oil Rivers, —, V.C. (see also *Congo*,
France, *Germany*, *Portugal*, and
Spain).

ARGENTINE REPUBLIC.

V.C.

CHILE.

Santiago, J. G. Kennedy, C.G.; J. H.
Thomas, V.C.
Caldera, H. B. Beazley, V.C.
Copuimbo, J. Grierson, C.
Valparaiso, W. H. Newman, C.; A. F.

C.

K.C.I.E.,

aker, V.C.

ing), V.C.
auch, V.C.

Talcahuano, F. Elton, V.C.
Taltal, T. H. Peters, V.C.
Tocopilla, W. H. Williams, V.C.
Tomé, J. S. Vaillant, V.C.

CHINA.

Pekin, B. Brennan, C. (see *Tien-tsin*).
Amy, R. J. Forbes, C.; C. P. Simoes,
Clerk.

ral).

BADEN.

Carlsruhe, C. Oppenheimer, C.G.
Mannheim, F. Ladenburg, V.C.

BAVARIA.

Munich, V. A. W. Drummond, Chargé
d'Affaires; J. S. Smith, C.

V C.

BELGIUM.

Brussels, T. E. Jeffes, V.C.
Antwerp, G. R. Perry, C.G.
Ghent, G. H. Hallett, V.C.
Louvain, R. Peters, V.C.
Ostend, F. G. Thellusson, V.C.

; T. L.

BORNEO.

Brunei, —, C.G.; M. B. Kasim, C.A.
Sandakan, W. B. Fryer, C.A.

en, C.

BRAZIL.

Abbott, C.G.;
C. and T.
C.

W'enchow, H. B. Bristow, C.
Wuhan, C. M. Ford, C.

COLOMBIA.

V.C. (V.C.
Pernambuco, A. Cohen, C.; W. Hughes,

Bogota, W. J. Dickson, C.G.; T. H.
Wheeler, V.C.
Buenaventura, J. Davey, V.C.

HER MAJESTY'S CONSULAR OFFICERS.

COLOMBIA—continued.

Honda, H. Hallam, V.C.
Medellin, W. Gordon, V.C.
Panamá, L. Joel, C.G.
Barranquilla, R. A. Joy, V.C.
Carthagena, T. C. Stevenson, V.C.
Colon, C. C. Mallet, C.
Santa Martha, M. F. Carr, V.C.

CONGO, G. F. N. B. Annesley, C.

COREA (see *China*).

COSTA RICA.

[C.G.]
 See *Guatemala*, J. P. Harriss-Gastrell,
San José, C. Sharpe, C.
Port Limon, T. H. Taylor, V.C.

DENMARK.

Copenhagen, A. P. Inglis, C. ; A. S. MacGregor, V.C.
Aarhus (Jutland), R. Wulff, V.C.
Bornholm, Is. of, J. Hintze, V.C.
Elsinore, L. M. F. Schmidt, V.C.
Fredericia (Jutland), H. M. E. Rasmussen, V.C. [V.C.]
Frederickshaven (Jutland), W. Schmidt,
Kastrup, S. A. Fugl, V.C.
Korsør, P. Jorgensen, V.C.
Lemvig (Jutland), A. Andersen, V.C.
Nyborg (Funen), W. Krünse, V.C.
Odense (Funen), E. Bendz Muus, V.C.
Randers (Jutland), W. Hald, V.C.
Thisted (Jutland), E. A. Bendixsen, V.C.
Thorshavn (Faroe Is.), R. Oestrom, V.C.
Reykjavik (Iceland), W. G. Paterson, C.
St. Thomas and Ste. Croix, Herman McDougal, C.
Bassin (S. Croix), R. Armstrong, V.C.
Fredericksted (S. Croix), R. Merlin, C.A.

DOMINIC. REPUBLIC.

See *Hayti*, J. N. E. Zohrab, C.G.
San Domingo, D. Coën, V.C.
Porto Plata, A. Reimer, V.C.

EGYPT.

Cairo, Sir E. Baring, G.C.M.G., K.C.B., K.C.S.I., A. and C.G. ; R. Borg, C.
Assuan, B. Sarkiss, C.A.
Birket-es-Sab, C. S. Carr, C.A.
Luxor, A. Mustapha, C.A.
Mansourah, F. T. Murdoch, C.A.
Mehalla, G. J. Kent, C.A.
Zag-a-Zig, S. Felice, V.C.
Alexandria, Sir C. Cookson, K.C.M.G., C.B., C. and J. ; S. F. Huri, Cancell. and Dragoman.
Damietta, A. Anhoury, C.A.
Port Said, W. P. Burrell, C. ; F. F. Maling, V.C.
Suez, J. R. Norrish, V.C.
Suakin, H. D. Barnham, C.

EQUATOR.

Quito, C. W. Lawrence, M.R. and C.G.
Guayaquil, G. Chambers, C.

FRANCE.

Paris, F. Atlee, C.M.G., R. and L., and C. ; J. F. D. Bowden, V.C.
Ajaccio (Corsica), M. H. Drummond, C.
Bastia, A. C. Southwell, V.C.
Calvi & Ile Rousse, A. Roncajolo, V.C.
Algiers, Sir R. L. Playfair, K.C.M.G., C.G. ; G. W. Crawford, V.C.
Beni Saf, J. O. Stewart, V.C.
Bône, Abel de la Croix, V.C.
Oran, A. Boozo, V.C.
Philippeville, H. Teissier, V.C. [V.C.]
Bordeaux, W. Ward, C. ; W. J. Norcop,
Arcachon, Adrien F. de Lobel, V.C.
Bayonne, Capt. R. P. Leeson, V.C.
Biarritz, E. H. W. Bel'airs, V.C.
Pau, A. H. Foster-Barham, V.C.
Boulogne, E. W. Bonham, C. ; R. N. Surplice, V.C.
Calais, W. Thomsett, V.C.
Brest, J. G. Haggard, C.
L'Orient, F. Jullien, V.C.
Cayenne, W. Wyndham C. (see *Surinam*) ; L. Wacongne, V.C.
Cherbourg, Hon. H. P. Vereker, C. ; G. Bonfils, V.C.
Le Mans, John de Veulle, V.C.
St. Malo, Hon. E. Henniker-Major, V.C.
Dakar (W. Africa), Capt. Foache, V.C.
Dunkirk, E. Taylor, C.
Havre, F. Bernal, C.G. ; J. Rowell, V.C.
Caen, Major A. J. Leeson, V.C.
Dieppe, H. W. Lee Jortin, V.C.
Fécamp, A. Handisyde, V.C.
Honfleur, F. Lethbridge, V.C.
Rouen, Major W. P. Chapman, C. ; R. Bernal, V.C.
Trouville-Deauville, A. F. O'Neill, V.C.
Marseilles, C. G. G. Perceval, C.
Cette, G. Espitalier, V.C.
Lyons, R. Ottley, V.C.
Toulon, L. J. B. V. Jouve, V.C.
Martinique, W. Lawless, C.
Basse Terre, —, C.A.
Fort de France, —, C.A.
Pointe-à-Pitre, J. Japp, V.C.
Nantes, B. Pauncefote, C.
Croisic, A. M. P. Maillard, V.C.
La Rochelle, R. S. Warburton, V.C.
Sables d'Olonne, T. Lelièvre, V.C.
St. Nazaire, H. E. Dickie, V.C.
Tonnay-Charente, G. L. Link, C.A.
New Caledonia, E. L. Layard, C.M.G. C. ; E. L. C. Layard, V.C.
Nice, J. Harris, C. ; E. Gurney, V.C.
Cannes, J. Taylor, V.C.
Menton, C. Palmero, V.C.
Réunion, C. L. St. John, C.
Saigon (Cochin China), C. F. Tremlett, C.
Tahiti (Society Is.), A. G. S. Hawes, C. ; G. Miller, V.C.

GERMANY.

Berlin, Gerson von Bleichröder, C.G. Hans von Bleichröder, V.C. [V.C.]
Dantzic, H. Carew-Hunt, C. ; M. Durège,
Breslau, H. Humbert, V.C.
Königsberg, A. Maeckelburg, V.C.
Memel, H. Pietsch, V.C.
Pillau, R. Lietke, V.C.
Düsseldorf, T. R. Mulvany, C.

GERMANY—continued.

Frankfort-on-Main, C. Oppenheimer, C.G.; B. Goldbeck, V.C.
Hamburg, Hon. C. S. Dundas, C.G.; G. A. Pogson, V.C.
Brake, K. Gross, V.C.
Bremen, C. H. Reike, V.C.
Bremerhaven, &c., J. Schwoon, V.C.
Cuxhaven, J. P. Angelbeck, V.C.
Emden, F. D. Ihnen, V.C.
Flensburg, T. Hollesen, V.C.
Husum, C. Christiansen, V.C.
Kiel, C. Kruse, V.C.
Lubeck, H. L. Behncke, V.C.
Rostock, C. Lesenburg, V.C.
Tonning, C. Becker, V.C.
Wismar, H. Podeus, V.C.
Stettin, W. Powell, C.; W. H. Reid, V.C.
Swinemünde, E. Rose, V.C.

GREECE.

Athens, T. G. Dickson, V.C.
Corfu, R. Reade, C.; T. Woodley, V.C.; O. Alexander, Chan.
Cephalonia, J. Saunders, V.C.
Zante, E. D. Canale, V.C.
Patras, T. Wood, C.; F. B. Wood, V.C.
Calamata, D. A. Leondaritti, V.C.
Pirgos, C. Fauquier, V.C.
Piræus, H. L. Dupuis, C.
Ergasteria, S. Desposito, V.C.,
Volo, A. A. C. E. Merlin, V.C.
Syra, J. Anderson, C.; J. Quintana, V.C.

GUATEMALA.

Guatemala, J. P. Harriss-Gastrell, M.R. & C.G.; A. Chapman, C.
Livingston, H. S. Wardlaw, V.C.

HAWAIIAN ISLANDS.

Honolulu, Major J. H. Wodehouse, Comr. and C. G.; T. R. Walker, V.C.

HAYTI.

Port-au-Prince, J. N. E. Zohrab.
Aux Cayes, E. L. Dutton, V.C.
St. Marc, John A. De Lande, V.C.

HERVEY IS.

Raratonga, R. Exham (Acting), C.

HESSE DARMSTADT.

Darmstadt, Hon. W. N. Jocelyn, C.B., Ch. d'Affaires; C. Oppenheimer, C.G.

HONDURAS.

(See *Guatemala*), J. P. Harriss-Gastrell, M.R. and C.G.
Amapala, J. Rössner, V.C.
Omoa, J. F. Debrot, C.
Truxillo, W. Melhado, C.

ITALY.

Rome, A. R. Franz, C.
Civita Vecchia, L. Sperandio, V.C.
Cagliari (I. of Sard.), E. Pernis, C.
Carlo Forte, San Antico, San Pietro, A. Armeni, V.C.

ITALY—continued.

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Terranova, G. Tamponi.
Florence (North Italy & East Tuscany)
 Sir D. E. Colnaghi, C.G.; A. J. French, V.C.
Ancona, A. P. Tomassini, V.C.
Milan, J. Whitmore, V.C.
Turin, G. E. Biletta, V.C.
Venice, Edward D. Zuccato, V.C.
Genoa, M. Brown, C.; E. Reader, V.C.
San Remo, J. Congreve, V.C.
Savona, O. Ponzzone, V.C.
Spezia, M. C. Gurney, V.C. [C.
Leghorn (Tuscany), Lt. H. O'Neil, R.N.,
Elba, E. Fossi, V.C.
Naples (S. Italy), E. H. B. Hartwell, C.; F. T. Turner, V.C.
Bari, E. Berner, V.C.
Barletta, M. Parlender, V.C.
Brindisi, S. G. Cocoto, C.
Castellamare, J. Drinkwater, V.C.
Catanzaro, A. Cricelli, V.C.
Gallipoli, A. Zarb, V.C.
Gioja, A. Briglia, V.C.
Manfredonia, C. Caffarelli, V.C.
Monopoli, L. Finamori Pepe, V.C.
Salerno, P. Consiglio, V.C.
Taranto, G. Alberti, V.C. [V.C.
Palermo, W. Stigand, C.; J. Towsey,
Catania, R. O. Franck, V.C.
Girgenti, E. A. Oates, V.C.
Licata, A. Giglio, V.C.
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Massara, V. F. Verderame, V.C.
Messina, vacant.
Milazzo, S. Trifiletti, V.C.
Scoglitti, C. Porcelli, V.C.
Syracuse, N. Bisani, V.C.
Terranova, G. Bresmes, V.C.
Trapani, G. Marino, V.C.
Reggio (Calabria), Mr. Ed. Kerrick.

JAPAN.

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Hiogo and Osaka, J. J. Ensle, C.
Nagasaki, J. J. Quin, C.
Yokohama, J. Troup, C.

LIBERIA.

Capt. J. Shaw Hay, C.M.G., C.

MADAGASCAR.

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Fenoarivo, —, V.C.
Mahanora, J. J. Wilson, V.C.
Mananzary, C. F. Griffin, V.C.
Mojunga, S. Knott, V.C.
Vatomandry, —, C.A.
Vohemar, G. d'E. de Chermoy, V.C.

MEXICO.

Mexico, L. E. G. Carden, C.
Guaymas, —, V.C.
Mazatlan, C. Woolrich, V.C.
Nuevo Laredo, T. O'Connor, V.C.

PERSIA.

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Meshed, Major-Gen., C. S. Maclean,
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Resht, ———, C.
Tabreez, Col. C. E. Stewart, C.P.,
C.M.G., C.G.*

PERU.

Lima, Col. C. E. Mansfield, R.C.M.G.,
V.C.

PORTUGAL

V.C.
V.C.

ROMANIA.

G. ; A.

V.C.

pp. V-C.

Y.C.

: E. Smith, V.C.

Cettinjt, W. Baring, Chargé d'Affaires.

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Mangan, A. Redman, V.C.
Saffee, G. P. Hunot, V.C.

MUSCAT.

E. Mockler, C., Acting.

***Castrell.**

C.

C.

C.
C.

(Western), Sir J.

C.M.G., C.

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P. W. J. Stevens, V.C.
Batoum, D. R. Peacock, V.C.
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Harford, V.C.
; W. Breslau,
[V.C.
C.
C.
C. A. Talbot, C.
; J. Winzer, V.C.

SALVADOR.

See *Guatemala*, J. P. Harris-Gastrell,
M. R. & C. G.
San Salvador, J. Moffat, C.
La Union, J. Harrison, V.C.

SAXE COBURG GOTHA.

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SAXONY.

Leipzig, Baron B. von Tauchnitz, C.G.;
Baron C. von Tauchnitz, V.C.

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Nisch, R. D. G. Macdonald, V.C.

SIAM.

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and C.G., E. B. Gould, C.
Kedah, &c., A. Maclean Skinner, C.
Chiengmai, E. H. French, V.C.

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Alicante, J. W. Cumming, V.C. [V.C.
Altea and Calpe, M. Javaloyes, V.C.
Burriana, P. Aysara, C.A.
Denia, J. A. Morand, V.C.
Gandia, F. Romaguera, V.C.
Jabea, J. B. Albi Gual, V.C.
Palamos, P. Mataa, V.C.

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H. Macpherson, V.C.
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Ricardo de Urioste, V.C.
Carril and Villagarcia, —, V.C.
Corrubion, Francisco del Rio, V.C.
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Gijon, W. Penlington, V.C.
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Santos, V.C.
Rivadeo, —, V.C.
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Fernando Po, E. H. Hewett, C.M.G., C.
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C.G. and C.J.; S. H. Little, V.C.
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Cienfuegos, G. M. Fowler, V.C.
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Adra, H. Benet, C.A.
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Almeria, W. M. Lindsay, V.C.
Carthagena, W. Milvain, V.C.
Garrucha and Villaricos, G. C. Peckett,
Granada, H. Stanier, V.C. [V.C.
Linars, W. Whyte, V.C.
Marbella, M. Calzado, C.A.
Mazarron, E. G. Pearce, V.C.
Motril, P. J. Llorca, C.A.
Manila (Phil. Islands), A. Gollan, C.
Cebu, G. E. A. Cadell, V.C.
Iloilo, G. Shelmerdine, V.C.
Sual, F. Heald, V.C.
Palma (Balearic Is.), F. W. Mark, C.;
E. Sans, V.C.
Iviza, J. E. Wallis, V.C.
Port Mahon, G. Segui, V.C.
Porto Rico, R. H. Hertalet, C.; W. G.
Latimer, V.C.
Aguadilla, A. Ganslandt, V.C.
Arecibo, A. Nones, V.C. [V.C.
Arroyo de Guayama, J. C. McCormick,
Humacao, Naguabo, and Fajardo, A.
Roig, V.C.
Mayaguez, H. C. Fritze, V.C.
Ponce, J. F. Finlay, V.C. [V.C.
Vidues (or Crab Is.), H. N. Longpre,
Santiago de Cuba, F. W. Ramsden, C.
Baracoa, A. Soler y Espalter, C.A.

SPAIN—continued.

Guantanamo, J. F. Mackinlay, C.A.
Teneriffe (Canary Is.), J. H. Dupuis,
 C.; J. Edwards, V.C.
Is. of Lanzarote, J. T. Topham, V.C.
Las Palmas, J. Miller, V.C.
Orotava, P. S. Reid, V.C.

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 Olivecrona, V.C.
Borgholm, J. E. Raberg, C.A.
Calmar, C. O. Söderbergh, V.C.
Gefle, E. Kökeritz, V.C.
Gotland, J. E. Stare, V.C.
Hernösand, C. L. Carlson, V.C.
Huniksväl, O. W. Wallberg, V.C.
Lulea, N. Hamond, V.C.
Norrköping, G. F. A. Enhorning, V.C.
Oland, Capt. S. O. T. Matthiesen, V.C.
Oscarshamn, O. Wingren, V.C.
Skelleftea, A. Markstedt, V.C.
Söderhamn, P. Sundh, V.C.
Sundsvall, C. E. Bredenberg, V.C.
Umea, W. Glas, V.C.
Westervik, J. C. Tenger, V.C.
Gottenburg, J. Duff, C.; R. Duff, V.C.
Carlsrona, A. Palander, V.C.
Halmstad, E. M. Beckeman, V.C.
Helsingborg, C. G. M. Westrup, V.C.
Landsrona, F. E. Neess, V.C.
Malmo, T. Flensburg, V.C.
Marstrand, A. N. Widell, V.C.
Strömstadt, W. T. Lundgren, V.C.
Uddevalla and Lysckihl, W. Thorburn,
Warberg, R. C. T. Jobson, V.C. [V.C.
Ystad, H. R. T. Nilsson, V.C.
Christiania (Norway), T. Mitchell, c.n.,
 C.G.; W. R. Hearn, V.C.
Arendal, M. Kallevig, V.C.
Bergen, H. D. Janson, V.C.
Bodo, V. B. Jentoft, V.C.
Brevig and Langesund, S. Larsen, V.C.
Christiansand, F. Reinhardt, V.C.
Christiansund, G. Parelius, V.C.
Drammen, K. Gram, V.C.
Dröbak, K. G. H. Lehmann, C.A.
Drontheim, R. F. Kjeldsberg, V.C.
Egersund, S. Tybring, V.C.
Farsund, P. I. Sundt, V.C.
Flekkefiord, J. P. M. Eyde, V.C.
Frederickshald, L. F. Voigt, V.C.
Frederickstad, C. Thiis, V.C.
Hammerfest, G. Robertson, V.C.
Hougsund, J. Jacobsen, V.C.
Kragerö, H. Larsen, V.C.
Laurvig, J. Christiansen, V.C.
Lofoden Is., H. E. Rouquette, V.C.
Mandal, T. F. Andorsen, V.C.
Molde, P. F. Dahl, V.C.
Mosjøen (Vefsen), H. P. Dahl, V.C.
Moss, W. Erichsen, V.C.
Namsos, J. Sommerschild, V.C.
Risör, H. C. Finne, V.C.
Skien and Porsgrund, J. Franklin, V.C.
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Tönsberg, S. Holst, C.A.
Tromsø, S. Holst, V.C.
Vadsö, B. Ackerman, V.C.
Vardo, R. S. Holmboe, V.C.

SWITZERLAND.

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 Min. Plen.
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Lausanne, A. Galland, V.C.
Zurich, H. Angst, C.

TRIPOLI.

Tripoli, F. R. Drummond-Hay, C.G.;
 A. Dickson, V.C.
Khoms, F. Zammit, V.C.
Bengasi, —, C.

TUNIS.

Tunis, R. Drummond-Hay, C.
Bizerta, T. N. Spezzichino, C.A.
Gabes, F. Calleja, C.A.
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TURKEY.

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Panderma, —, C.A.
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Adrianople, H. A. Cumborbatch, C.
Aleppo, T. S. Jago, C.
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Alexandretta, A. Catoni, V.C.
Antioch and Swedia, J. Douëk, V.C.
Mersyna, A. N. Lykiardopulo, V.C.
Baghdad (Turkish Arabia), Col. W.
 Tweedie, c.s.i., C.G.
Bussorah, —, C. (Acting).
Beyrout (Syria), G. J. Eldridge, c.M.G.,
 C.G.; H. C. A. Eyres, V.C.; E.
 Shoucair, Cancellier.
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Damascus, J. Dickson, C.
Lattakia, N. Vitali, V.C.
Port of Tripoli, A. Gazi, C.A.
Bosna Serai (Bosnia and Herzegovina),
 E. B. Freeman, C.
Crete (Island of), A. Biliotti, c.M.G., C.
Candia, L. A. Calocherino, V.C.
Rethymo, T. A. Trifilli, V.C.
Egypt (see Egypt).
Jeddah, C. Wood, C.; A. Razzak, V.C.
Hodeida, &c., A. Muhammad, V.C.
Jerusalem, N. T. Moore, c.M.G., C.
Jaffa, H. Amzalak, C.A.
Koordistan, C. Lloyd, C.
Diarbekir, —, V.C.
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Salonica, J. E. Blunt, c.B., C.G.
Cavalla, S. Pecchioli, V.C.
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Janina, B. Kyprioti, C.A.

TURKEY—continued.

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Adalia, G. A. Keun, V.C.
Aidin, A. Z. Eumorfopulo, C.A.
Aivali, &c., A. Eliopulo, V.C.
Axar, D. Clado, C.A.
Is. of Mitylene, F. Hadkinson, V.C.
Is. of Rhodes, J. F. Jones, V.C.
Scala Nuova, X. Alexarchi, V.C.
Scio and Tchesmé, D. Anamissaki, V.C.
Thyra, H. Vedova, C.A.
Vourlah, N. Crindiropulo, C.A.
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Philippopolis, R. W. Graves, V.C.
Roustchouk, W. H. Dalziel, V.C.
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Newport News, ———, V.C.
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Pt. Townsend, Rev. J. Alexander, V.C.
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URUGUAY.

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ZANZIBAR.

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Engineer Surveyor-in-Chief — Thos. W. Trail, C.E., R.N.,
 Inspector of Chain Cables and Anchor Testing Establishments.
Principal Surveyor for Tonnage—W. Moore.
Surveyor for Iron Ships—J. Wimshurst.
Surveyor for Wood Ships—W. H. Turner.
Registrar General of Seamen : 82, Basinghall Street—Robert Jackson, Esq., Secretary.
Sanitary Officer for Ships' Crews—J. F. Rotton, Assistant Secretary to Local Government Board, Whitehall, S.W.
Meteorological Office : 116, Victoria Street, S.W.—Robert H. Scott, Esq., F.R.S., Secretary.
Nautical Almanac Office : 3, Verulam Buildings, Gray's Inn, W.C.—John Russel Hind, Esq., Superintendent.
Royal Observatory, Greenwich : Astron. Royal—William Henry Mahoney Christie, F.R.A.S.
Lloyd's Register of Shipping—2, White Lion Street, Cornhill, E.C.
Lloyd's Captains' Rooms—Royal Exchange, E.C., hours 9 to 6.
The Jerusalem—Cowper's Court, Cornhill.
The Baltic Rooms—Threadneedle Street.
Receiver of Wreck—J. C. Stockton, Queen's Warehousekeeper.
Chamber of Commerce : 1, Great College Street, Westminster, S.W.—James Hole, Esq., Agent.
General Shipowners' Society : 12, St. Michael's Alley, Cornhill—W. H. Cooke, Secretary.
Steam Shipowners' Association : 14, Leadenhall Street—W. C. Morgan, Secretary.
Shipping World Offices—25, Pilgrim Street, Ludgate Hill, E.C.
Shipping Gazette and International Code List—54, Gracechurch Street.
Marryat's Code List—Richardson & Co., 13, Pall Mall, S.W.
National Lifeboat Institution : 14, John Street, Adelphi, W.C.—Secretary.
Shipwrecked Fishermen and Mariners' Society Offices : Wells Street and Dock Street, London Docks.—W. R. Buck, Secretary.
Sailors' Home—Dock Street, E., and Gravesend.
The Salvage Association—Birchin Lane, E.C.

COALING STATIONS OF THE WORLD.

HOME PORTS.—Belfast, Bristol, Cardiff, Cowes, Dartmouth, Dublin, Exeter, Falmouth, Glasgow, Grimsby, Hull, Liverpool, London, Milford Haven, Newport (Mon.), Oban, Plymouth, Portsmouth, Scilly, Southampton, Sunderland, Swansea, Stornoway, Tyne.

CONTINENTAL PORTS.—Boulogne, Bordeaux, Bourbon, Brellisnoes, Caen, Calais, Carentan, Cherbourg, Corunna, Cronstadt, Dieppe, Etaples, Fecamp, Gravelines, Hamburg, Havre, Honfleur, Lisbon, Pontreux, Port Audemer, Rouen, Rotterdam, St. Petersburg, Trouville, Valery, Vigo.

MEDITERRANEAN PORTS.—Alexandria, Barcelona, Beyrout, Brindisi, Cadiz, Cagliari (Sardinia), Constantinople, Corfu, Gibraltar, Malta, Marseilles, Naples, Palermo, Piræus, Port Said, Smyrna, Villafranca (Nice).

ADRIATIC PORTS.—Genoa, Trieste, Savona.

BLACK SEA PORTS.—Galatz, Ibrail, Odessa.

ARABIAN SEA PORTS.—Aden.

RED SEA PORTS.—Perim, Suez.

ATLANTIC PORTS.—Antigua, Ascension, Bahia, Baltimore, Barbadoes, Belize, Bermudas, Buenos Ayres, Cape Coast Castle, Cape Town, Ceara, Congo, Dix Cove, Elmina, Falkland Islands, Fernando Po, Gambia, Halifax, Havana, Loanda, Madeira, Martinique, Monte Video, Nassau, Natal, New Orleans, Para Maranham, Pernambuco, Pictou, Point de Galle, Port Stanley (F.I.), Quebec, Quetta, Rio Janeiro, Santa Cruz (Teneriffe), St. John's (N.F.), St. Lucia, St. Helena, St. Michaels (Azores), St. Thomas, St. Vincent, Sierra Leone, Simon's Town, Trinidad, Whyda.

PACIFIC AND INDIAN OCEAN.—Adelaide, Amoy, Aca-pulco, Auckland, Bangkok, Batavia, Bombay, Brisbane, Buscah, Bushire, Calcutta, Caldera, Callao, Chiloe, Christchurch, Coconada, Colombo, Coquimbo, Coronel, Diego Garcia, Esquimault, Fayal, Galle, Guayaquil, Hakodadi, Hobart Town, Hong Kong, Honolulu, King George's Sound, Kobi, Kurrachee, Labuan, Leruka, Lota, Madras, Manila, Mauritius, Mazatlan, Melbourne, Moulmein, Nagasaki, Otago, Panama, Payta, Penang, Perth, Rangoon, San Diego, San Francisco, Saigon, Seychelles, Shanghai, Singapore, Sourabaya, Sydney, Tahiti, Tamsiu Fechau, Tonkah, Torres Straits (Cape Breton), Trincomalee, Valparaiso, Wellington, Yokohama, Zanzibar.

PORT DIRECTORY OF THE WORLD.

I.—PORTS OF THE UNITED KINGDOM.

(COMPILED BY J. J. FLETCHER, C.E.)

LIST OF ABBREVIATIONS EMPLOYED.

Accn. = Accommodation for shipping, &c.	P. = Pilotage.
AST. = Average Spring Tides.	C. = Compulsory.
Auth. = Authority or owner of port, docks, &c.	NC. = Non-Compulsory.
D. = Depth of Water (generally applied to depth on bar unless otherwise stated).	Pop. = Population
En. = Entrance	R. of N. = Rise of Neaps.
Equin. = Equinoctial.	R. of T. = Rise of Tide.
fm = Fathom.	Rys. = Railways which connect with the harbour.
HW. = High Water.	ST. = Spring Tides.
Lat. = Latitude.	THW. = Time of High Water.
Long. = Longitude.	f. & c. = full and change (of moon).
LV. = Largest Vessel or Vessels which have entered the port at any time.	Tr. = Trade of Port.
NT. = Neap Tides.	I. = Imports.
OT. = Ordinary Tides.	E. = Exports.
	W. = Wind, <i>i.e.</i> , the prevailing or other winds which affect the harbour.
	W. of E. = Width of Entrance.

ABBREVIATIONS OF NAMES OF RAILWAY COMPANIES.

B. = Blackwall.	L. & N.W. = London & North Western.
B. H. B. = Belfast, Holyhead & Bangor	L. & S.W. = London & South Western.
B. & N. C. = Belfast and Northern Counties.	L.B. & S.C. = London, Brighton & South Coast.
B.C. = Belfast Central.	L.C. & D. = London, Chatham & Dover.
B.J. = Birkenhead Joint.	L.T. & S. = London, Tilbury & South-end.
B. & M. = Brecon & Merthyr.	M.S. & L. = Manchester, Sheffield & Lincolnshire.
Cal. = Caledonian.	M. & C. = Maryport & Carlisle.
Cam. = Cambrian.	M. = Midland.
C.L.C. = Cheshire Lines Committee.	M.G.W. = Midland Great Western.
D. & S. = Dingwall & Skye.	N. & B. = Neath & Brecon.
D. & A. = Dublin & Antrim.	N.B. = North British.
D.W. & W. = Dublin, Wicklow & Wexford.	N.E. = North Eastern.
D.N. & G. = Dundalk, Newry & Greenore.	P. & W. = Preston & Wyre.
F. = Furness.	R. = Rhymney.
G. & S.W. = Glasgow & South Western.	R. N. & C. = Ryde, Newport & Cowes.
G.E. = Great Eastern.	S. & W. = Severn & Wye.
G.N. = Great Northern.	S.E. = South Eastern.
G.N. (I.) = Great Northern (Ireland).	T.V. = Taff Vale.
G.N. (S.) = Great Northern (Scotland).	W. C. & E. = Waterford, Cleator, and Egremont.
G.W. = Great Western.	W. & C.I. = Waterford & Central Ireland.
H. = Highland.	W. & L. = Waterford & Limerick.
I.M. = Isle of Man.	W. & T. = Waterford & Tranmore.
I.W. = Isle of Wight.	W. M. & C. = Wrexham, Mold & Connah's Quay.
L. & E. = Limerick & Ennis.	
L. & F. = Limerick & Foynes.	
L. & Y. = Lancashire & Yorkshire.	

Pilotage.—NOTE.—*The several pilotage rates herein specified are subject to a reduction of one-fourth part, in respect of vessels propelled by steam and vessels towed by steam vessels, provided that if any such vessel shall be propelled by steam, or towed by a steam vessel for a part only of the distance for which any such rate may be payable, the reduction of one-fourth shall be made on such part only of the said rate as shall be proportionate to the distance so propelled or towed.*

Towage.—NOTE.—*The Owners of Tugs at various ports will not be responsible for any damage occurring to vessels while in tow of their steamers.*

ABERAYRON, Cardiganshire, Wales. Bay of Cardigan. Lat. 52° 14' N ; long. 4° 15' W. Pop. about 1,200. Auth. Owner, Alban Gwynne, Esq., under Statute 47 Geo. III. THW. f. and c. 7h 25m. D. Dry at LW. ; 12ft at HWST. Accn. Harb. of about 5 acres, with stone piers on N. and W. sides, each 396ft long, extending to half-tide mark. W. prev. NW. to NE. Tr.—I. Coal and limestone ; E. Oats, pigs, butter, and timber. Harb. is used chiefly by locally owned vessels, drawing from 8ft to 9ft.

Charges.—2d per ton reg. on ships, 1/ per ton on cargo.
Officials.—Harb. Master, J. Davies Compton ; Shipping Agent, Evan Loyn.

Hotel.—"Feathers Royal" Hotel, E. Jones.

ABERBROTHWICK.—See Arbroath.

ABERDEEN, Aberdeenshire. On the Dee. Lat. 57° 8' 20" N ; long. 2° 3' 55" W. Pop. 120,000. Auth. Harb. Commission, incorporated under Acts of Parliament, 31 and 32 Vict., c. 138 ; 34 and 35 Vict., c. 141. P. NC. THW. 1 hour f. and c. Sp. rise 13ft ; N. rise 10ft ; D. on bar 10½ft. W. prev. are from SW., and most dangerous gales on coast are from SSE. to ESE. Rys. Cal. and G.N. (S.) Tr.—I. Coal, lime, iron, timber, bones, esparto, fibre, slates, &c. ; E. Cattle, oats, granite, pit props, sleepers, staves, paper, &c. At HW. of ST. vessels of 21ft dft. enter the harb., and at LW. vessels drawing 8ft enter. The navigation channel, the entrance to the harb. and docks is formed by the N. pier, extending 2,000ft into the German Ocean, and S. breakwater running out about 1,000ft from the shore. W. of E. 600ft. En. to Victoria Dock, one 70ft wide, with a HWD. of 24½ft. ; lock 250ft x 60ft wide, over which there is a HWD. of 20½ft. Accn. :—

	Areas.	Average Depth.	
	Acres.	L.W.O.S.T.	L.W.O.S.T.
		Ft.	Ft.
Navigation Channel	40'515	23	10½ on bar.
Tidal Harbour, 1,720ft. x 860ft.	30'323	21	14
Albert Basin... 2,680ft. x 470ft.	24'948	16½	9
Victoria Dock, 2,020ft. x 471ft.	21'749	23	18 to 22
Upper Dock ... 820ft. x 490ft.	7'815	23	18 ,, 22

125'350

Extensive warehouses and cranage accommodation up to 10 tons ; shears to lift 50 tons. Particulars of Patent Slipways :—

Name.	Owner.	Length.	Breadth.	H. of T	
				Sp.	N.
		ft.	ft.	ft.	ft.
Patent Slip	J. Duthie, Sons & Co.....	430	25	21	18
Do.	A. Hall & Co.	380	45	21	18
Do.	Do.	335	42	21	18
Graving Dock.....	.....	524	50	20	17

Charges. — Rates on vessels vary from 2d to 1/3 reg. ton. Lights, flags, or signals ¼d reg. ton for all vessels.

Pilotage.—District. The harb., the rivers Dee and Don, the coast between these rivers, and the coast southward from the mouth of the Dee to the extremity of the city's precincts or boundary on the Torry or south side of the Dee. On the Dee being

diverted as authorised by the "Aberdeen Harbour Act, 1868," the limitation shall extend and apply to that river when diverted. Rates.

Inwards pilotage rates :—

<i>Sailing Vessels.</i>				<i>Steam Vessels.</i>			
	£	s.	d.		£	s.	d.
For vessels under 50 tons	0	5	0	For vessels under 50 tons	0	5	0
50 and under 75	0	7	6	50 and under 75	0	7	6
75 " 100	0	10	0	75 " 100	0	9	0
100 " 150	0	12	6	100 " 150	0	10	0
150 " 200	0	15	0	150 " 200	0	12	6
200 " 250	0	17	6	200 " 250	0	15	0
250 " 300	1	0	0	250 " 300	0	17	6
300 " 400	1	5	0	300 " 400	1	0	0
400 " 500	1	10	0	400 " 500	1	2	6
500 " 600	1	15	0	500 " 600	1	7	6
600 " 700	2	0	0	600 " 700	1	10	0
700 " 800	2	5	0	700 " 800	1	15	0
800 " 900	2	10	0	800 " 900	2	0	0
900 " 1,000	2	15	0	900 " 1,000	2	5	0
1,000 and upwards	3	0	0	1,000 and upwards	2	10	0

Outward pilotage rates—one-half the inward rate, but not in any case less than 5/. For any vessel arriving in the lower basin or tidal harbour after the dock gates are shut :—For vessels under 150 tons 3/; for vessels 150 tons and upwards 5/. For each tide's work in the harb. each man in boat 2/. For any vessel beyond a radius of 2 miles from the eastern extremity of the north pier making a signal for a pilot, such sum as the captain pilot may decide, over and above the ordinary rate of pilotage. For any vessel calling in the bay for orders, and not entering the harb., requiring the services of a pilot boat, 20/, which shall include taking off orders. If after the expiry of 12 hours any pilot is detained on board, he shall be paid 2/6 for each tide during which he is detained; and if, after the expiry of such time, the pilot boat is required, 1/ for each man in boat for each passage between the harb. and vessel.

Towage.—Ordinary Sea Towage (by one or more tugs). From the docks or tidal harb. to the bay, or from the bay or outside Abercrombie's jetty, or *vice versa*, with cargo, reg. ton 2½d; with ballast 2d. Harb. Towage. Between Abercrombie's jetty and the docks, or from one part of the harb. or docks to another—If 200 tons or under 6/; above 200 and not ex. 500 tons 10/; above 500 tons and not exceeding 800 tons 15/; 800 and not exceeding 1,200 tons 30/; 1,200 tons and upwards 40/. In the event of any vessel being towed into the tidal harb. after the dock gates are shut, the tugboat shall, if required, continue the towage of such vessel into the dock the following tide without any additional charge. Minimum towage outwards or inwards 5/.

Officials.—Sec., W. Gordon; Treas. and Coll. of Harb. and Shore dues, P. Riddel; Supt., J. Pirie; Dock and Harb. Master, Capt. W. A. Crombie; Engineer, W. Smith; Gen. Man. of G. N. (S.) Ry., W. Moffatt; Lloyd's Surv., L. G. D. L. Hindmarsh; Coll. of H.M. Cust., G. C. Coates.

Hotels.—"Douglas," "Palace," "Waverley," "and Imperial."

ABERDOUR, Fifeshire. N. side of Firth of Forth, about 8 miles NW. of Edinburgh. Lat. 56° 10' N; long. 3° 20' W. Post-town, Burntisland. Pop. 1,900. Auth. Owner, the Earl of Morton. Agents, Messrs. Dalgleish & Bell, 22, Coates Crescent, Edinburgh. THW. f. and c. 2h 34m. Accn. Wooden pier 250ft long, with jetty carried out to 4ft LWST.; 16ft water at HWST.; dry, LW.; Neaps rise 10ft.

Charges.—1d per ton reg. on vessels; 1d per ton on cargo.

Official.—J. Gourley, Acting Harb. Master.

ABERDOVEY, Merionethshire. At the mouth of the Dovey, Bay of Cardigan. Lat. $52^{\circ} 30' N$; long. $4^{\circ} 15' W$. Pop. 1,500. Auth. Cam. Ry. Co., under lease from the Crown. THW. f. and c. 8h om. D. on bar 3ft 6in LWST., and 19ft HWST., but is subject to frequent alteration. Accn. Pier 367ft carried out to 12ft LWST., and a wharf 365ft long. W. prev. NE. to SW., and most dangerous S. to E. Tr. Live stock, slates, lead-ore, grain, cement, fish, &c. LV. Steamers from the Baltic with cargoes of timber up to 1,100 tons. Steam crane power. A lifeboat station.

Charges.—Moorage of vessels, $\frac{3}{4}$ d per ton reg.; slates, coal, bricks, iron, 2d per ton; timber, grain, flour, cotton, wool, petroleum, and general merchandise, 3d per ton actual weight.

Towage.—As per arrangement.

Officials.—J. Conacher, Secretary and General Manager, Cam. Ry., Oswestry; G. Owen, C.E., Engineer; Lewis Edwards, Harb. Master; J. H. W. Stephenson, Coll. of Customs, Aberystwith.

Hotels.—The "Dovey," the "Raven."

ABERFFRAW, Anglesea. A creek of Beaumaris. A bay of refuge in E. or N. winds. D. 15fms. HWST. Wharfage free. W. Jones, Dep. Lloyd's Agent and Harb. Master.

ABERLADY (PEFFER BURN), East Lothian. THW. at f. and c. same as Leith. Very small trade.

Officials.—H. Welch, Merchant; W. Wishart, Pilot.

ABERTHAW, Glamorganshire. In the Bristol Channel, between St. Donats and Porthkerry. Lat. $51^{\circ} 22' N$; long. $3^{\circ} 20' W$. No Harb. Auth. THW. 6h 48m. Tr. Aberthaw lime.

ABERYSTWITH, Cardiganshire, Wales. At the joint outlets of the rivers Rheidol and Ystwith. Lat. $52^{\circ} 24' 30'' N$; long. $4^{\circ} 5' 30'' W$. Pop. 7,600. Auth. Corporation of Aberystwith (Act of Parliament, 1874). P. NC. THW. f. and c. 7h 31m; Sp. rise 15ft; N. rise 10ft. D. on bar uncertain, as bar shifts. W. Most dangerous are SW. to W. by N. Rys. Cam. and Manch. and Milford. Tr.—I. Timber, coal, limestone, bricks, culm, hemp; E. Lead and copper ore, bark, corn, timber. LV. 367 reg. ton. The area of the harb. is 20 acres, dry at LWST. Quayage space for about 670ft is accessible to vessels of 500 tons. East Quay about 250ft long, with 14ft water HWST.; West Quay about 800ft long, with 12ft water HWST. There are two powerful capstans with ropes on each side of the harb. entrance, and a 3-ton crane. A lifeboat station.

Charges.—Harb. dues vary from 3d to 6d. Vessels exclusively employed in fishing are exempt from payment of harb. dues.

Pilotage.—District not defined. Rates. As per agreement.

Towage.—As per agreement.

Officials.—Town Clerk, A. J. Hughes; Harb. Master, Capt. J. Thomas; Coll. of H.M. Cust., J. W. H. Stephenson; Lloyd's Agent, Capt. J. Thomas; Lloyd's Surv., H. John.

Hotels.—"Belle Vue," W. H. Palmer; "Gogerddan Arms," J. Roberts; "Queen's," W. H. Palmer.

ACARSAID, Island of Skye, Hebrides. Lat. $57^{\circ} 10' N$; long. $6^{\circ} 2' W$. Bar dries at LW., 13 $\frac{1}{2}$ ft at HWST., and 10ft at HWNT. THW. 6h. 28m.

ACKERGILL, Caithness, 2 miles N. of Wick. Lat. $58^{\circ} 26' N$; long. $3^{\circ} 8' W$. Auth. Owner, G. Duff Dunbar, Esq., of Hempriggs. THW. 10h. 58m. Accn. A pier of masonry about 100ft long, used by fishing boats and by steamers loading into boats. D. Alongside 15ft HWOST., and 8ft at entrance of creek at LWST. There are no charges. W. prev. S., most dangerous NE. A lifeboat station. The harb. was destroyed by storms some years since. There is a good anchorage in the bay, with S. winds.

Official.—Harb. Master, Wm. Thain.

Hotel.—The nearest is at Wick.

ALDEBOROUGH, Suffolk. Lat. $52^{\circ} 6' N$; long. $1^{\circ} 30' E$. Pop. about 2,016. A small decayed port 12 miles from the mouth of the river Alde. There is no harb. authority. THW. 10h 45m. Sp. rise 8ft.; N. $6\frac{1}{2}$ ft. D. 18ft HWST. and 14ft HWNT. A lifeboat station.

Official.—S. Mills, Principal Coast Officer.

ALDERNEY.—See Channel Islands.

ALDRINGTON.—See Shoreham.

ALLOA, Clackmannanshire. On N. bank of Firth of Forth, 30 miles above Queensferry. Lat. $57^{\circ} 7' N$; long. $3^{\circ} 44' W$. Pop. 10,600. Auth. Harb. Trustees. under the Alloa Harbour Consolidation Act, 1872, and Alloa Harbour Acts, 1878 and 1889. P. NC. THW. f. and c. 3h 18m; Sp. rise $17\frac{1}{2}$ ft; N. rise 15ft; R. of N. $10\frac{1}{2}$ ft. D. on bar, Sp. 22ft to 24ft; N. 16ft. W. prev. from NW., not dangerous to shipping in the harb. Rys. Cal. and N.B. Tr.—I. Grain, timber, iron, dyewood, &c.; E. Pig-iron, coal, timber, dyewood, &c. LV. as follows:—

Date.	Name.	Gross Reg.	Net Reg.	Length.	Breadth.	Depth.
		tons.	tons.	ft. in.	ft. in.	ft. in.
1881	SS. <i>Hector</i>	1,978	1,283	284 4	34 8	37 0
1888	„ <i>Ingram</i>	1,748	1,122	257 0	34 6	19 4
1888	„ <i>Mass Brow</i>	1,751	1,131	260 0	35 1	17 8

No vessels can enter the harb. at LW. of ST. The harb. consists of a line of open quays and a wet dock. Dock 630ft \times 195ft, has an area of 3 imperial acres, depth ST. $17\frac{1}{2}$ ft and NT. $13\frac{1}{2}$ ft, and quayage 1,600ft. There are 400 yds of quayage space in tidal harb., also dry dock 210ft long, 37ft wide, $11\frac{1}{2}$ ft deep at OHW. Cranes for lifting 20 tons of grain per hour, and two steam cranes for coals.

Charges.—Harb. dues 2d reg. ton. Rates on entering into or using any wet dock $3\frac{1}{2}$ d to 1/ reg. ton. Vessels entering in ballast and loading out $3\frac{1}{2}$ d per ton. Vessels entering to load from another vessel, overside, half dues. Rates on goods vary from 1d to 1/ and $2/6$ per ton for gunpowder. Anchorage rates 1d and 3d reg. ton.

Pilotage.—District. From St. Abb's Head to Alloa, and *vice versa*. Rates. Same as Leith.

Towage.—As per Leith tariff.

Officials.—Clerk to Harb. Trust., N. MacWatt, Solr.; Harb. Master, J. Roy; Graving Dock Mans., A. Thompson & Sons; Coll. of H.M. Cust., G. H. E. Wright.

Hotel.—"Royal Oak."

ALLONBY, Cumberland, 21 miles SW. from Carlisle. There are a few boats employed in the cod and herring fisheries from this place.

ALNMOUTH, Northumberland. At the mouth of the Alne. Lat. $55^{\circ} 22' N$; long. $1^{\circ} 33' W$. Auth. Owner, the Duke of Northumberland. THW. f. and c. 2h 40m. D. on bar HWST. about 13ft 6in. W. prev. NE. Used by fishing boats and by timber-laden vessels of under 200 tons. Harb. dues; 1/ per vessel, if requiring ballast 6d per vessel. A lifeboat station.

Officials.—Agent, E. G. Wheler, Esq.; Harb. Master, Robt. Simpson; Pilot, G. Richardson.

Hotel.—"Ye Schooner," T. Binks.

AMBLE.—See Warkworth.

AMLWCH, Anglesea. Lat. $53^{\circ} 25' N$; long. $4^{\circ} 36' W$. Auth. Harb. Trustees, constituted by Statute 31 Geo. III. c. 125. Rys. The Anglesea Central Ry. Accn. A tidal harb. excavated from solid rock, can contain 30 vessels of about 200 tons each. THW. f. and c. 10h 30m; 16ft HWST.; 9ft. HWNT. W. prev. N. to W. and SW. Used by coasters of about 200 tons. Berths for about 20 vessels.

Charges.—8d per ton reg. on all vessels loading and unloading, and 6d per ton on all loading or unloading; other vessels 4d per ton, with a rebate of 1d per ton on all vessels leaving the harbour within 30 days after arrival, except in the case of vessels to or from foreign ports.

Official.—Harb. Master, James E. Williamson; Coll. of Port Dues, D. McLean.

ANCHMASTER, Caithness. A small fishery harb., near Clyth.

ANNALONG, co. Down, Ireland. Lat. $54^{\circ} 10' N$; long. $5^{\circ} 50' W$. Auth. The Grand Jury of co. Down, under 16 and 17 Vict., c. 136, s. 7. THW. 11h 28m. Accn. Area of harb. about 1 rood 16 perches. Dries at three-quarters ebb. Used by fishing boats of 9ft dft. and local vessels loading dressed granite. Quay frontage 609ft. LV. 111 tons.

Charges.—2d per ton reg., 2/6 each per annum on local vessels, and 6d each visit for vessels not belonging to the port.

ANNAN, Dumfriesshire, Scotland. Lat. $54^{\circ} 57' N$; long. $3^{\circ} 16' W$. Seaport in Solway Firth, at mouth of Annan river. Pop. 4,000. Rys. Carlisle & Glasgow. THW. f. and c. 11h 5m. Accn. A good harb., dry at LW., 15ft HWST. No harb. authority.

ANSTRUTHER UNION (Easter and Wester), Fifeshire. Lat. $56^{\circ} 13' 16'' N$; long. $2^{\circ} 41' 53'' W$. Auth. Commissioners of Anstruther Union Harb., by special Act, 23 and 24 Vict., c. 39, s. 5, and Anstruther Harbour Order, 1880. W. prev. W., most dangerous SE. to NE. Ry. Leven & East Fife Ry. THW. 2h 28m. Accn. New harb. has an area of 7 acres. D. 12ft at HWST. Old harb. has an area of $6\frac{1}{2}$ acres. E. pier (masonry), 1,200ft long; dry at LWST. W. pier is about 480ft long. Quayage about 1,720ft. Used by coasting steamers and sailing vessels, and by fishing boats. Cranes lift up to 10 tons.

Charges.—Harb. dues from $1\frac{1}{2}$ d to 4d per reg. ton.

Pilotage.—For vessels between 20 and 50 tons, $2\frac{1}{2}$ d per ton.

Official.—Clerk, H. B. Macintosh; Harb. Master, W. Lyall; Coll. of Dues, D. Pringle.

APPLEDORE, Devonshire. A small port within Barnstaple Bar. Lat. $51^{\circ} 5' N$; long. $4^{\circ} 4' W$. THW. 6h 15m. There is a stone pier at Instow, with 13ft to 15ft at HW.; dry at LW. Also two small dry docks and a patent slipway. (See Barnstaple.)

ARBROATH, Forfarshire. Seaport. Lat. $56^{\circ} 33' N$; long. $2^{\circ} 35' W$. Pop. 22,000. Auth. Harb. Trust., under Acts 2 Vict., c. 16, and Acts of 1864, and Harb. Order, 1877. P. NC. THW. f. and c. 1h 35m; Sp. rise 14ft; N. rise 11ft; R. of N. 8ft. D. on bar LW. of OST. 3ft; NT. about 6ft. W. prev. W. are W. and SW.; most dangerous from SE. Rys. Cal. and N.B. Tr.—I. Flax, hemp, jute, coal, iron, bones, guano, linseed-cake, bleaching-powders, salt, lime, timber, grain, slates, &c.; E. Sailcloth, yarns, linen, grain, potatoes, pit timber, stone, &c. LV. Steamers with flax of gross ton. of 1,000 to 1,300 tons. Outer harb.—W. of E. 100ft. Dock 420ft \times 260ft; dock area $2\frac{1}{2}$ acres; W. of E. 40ft. Depth on sill at HW. of Av.ST. 16ft to 17ft; quayspace of dock 1,350ft, and of basin 1,480ft, in length, and patent slipway 450ft long by 44ft wide. H. of T., ST. $15\frac{1}{2}$ ft; N. 11ft. A lifeboat station.

Charges.—Harb. dues $1\frac{1}{2}d$ to $1/6 + 25\%$ to 50%. Harb. lights and police $\frac{3}{4}d$ reg. ton. Plankage $1/$ to $6/6$ per vessel.

Pilotage.—District. Pilots are licensed for the harb. only. **Rates** per ton.—Coasting sailing vessels, 4d per ton; coasting steamers, 3d per ton; foreign trade sailing vessels, $4\frac{1}{2}d$ per ton; foreign steamers, 3d per ton. In addition to these, rates are levied (for providing the pilot master's salary), viz. :—Under 80 tons $1/$; 80 and under 100 tons $1/6$; 100 and under 120 tons $2/$; 120 and under 150 tons $3/$; 150 and under 180 tons $4/$; 180 and under 200 tons $5/$; 200 tons and upwards $7/6$.

Towage Rates included in pilotage rates.

Officials.—Clerk to Trust., W. K. Macdonald; Harb. and Pilot Master, Capt. D. Patterson; Coll. of Shore dues, W. Cargill; H. M. Cust., James Cassie.

Hotels.—"White Hart," "Imperial," and "Royal."

ARDBEAR, Galway.—See Clifden.

ARDGLASS, co. Down, Ireland. Lat. $54^{\circ} 15' 10'' N$; long. $5^{\circ} 36' 50'' W$. Ry. Belfast & Co. Down. THW. f. and c. 1h 0m. A seaport, the centre of the fishing stations on the NE. coast of Ireland. Auth. Commissioners of Public Works in Ireland, under Acts 39 and 40 Vict., c. 236. Accn. Area about 60 acres at HW. and 17 acres at LW., with depth from 2ft to 17ft at LW. and 15ft additional at HWST. D. at entrance 15ft to 18ft at LW. W. prev. SW., most dangerous ESE. to SE. Used by coasters of up to 150 tons, carrying coal and country produce, and by about 500 fishing vessels. LV. 200 tons. Quayage, north quay 500ft, south quay 1,000ft. There is a small dock adjoining the north quay, where vessels drawing 9ft can enter at HWST.

Charges.—6s per ton on cargo vessels, with 1d to 4d per ton wharfage, and an additional $\frac{1}{2}d$ per ton for each week, or portion of week, over first 21 days after arrival.

Officials.—Sec. to Commissioners of Public Works, Dublin, W. B. Soady, Esq.; Harb. Master, J. A. Mullins; Assist. Harb. Master, J. Cunningham.

Hotel.—"St. Alban's Arms."

ARDRISHAIG, Argyllshire. Lat. $56^{\circ} 0' 45''$ N ; long. $5^{\circ} 26' 30''$ W. Entrance to the Crinan Canal. Auth. Caledonian Canal Commissioners, by Act of Parliament. THW. oh 15m. D. in channel leading to canal from 4ft to 16ft, according to state of tide. D. at outside quay berths 9ft to 20ft. D. in canal and basins, 9ft 6in. Vessels 88ft by 20ft by 9ft can pass locks. Sp. rise 11ft ; N. 9ft. W. prev. SE. to SW. Used by coasting vessels and passenger steamers.

Charges.—2d per ton on vessel and 1d to 1/ per ton on goods.

Officials.—Supt., L. J. Groves.

Hotel.—"Royal."

ARDROSSAN, Ayrshire. On the Firth of Clyde. Lat. $55^{\circ} 38' 27''$ N. ; long. $4^{\circ} 49' 28''$ W. Pop. 4,000. Auth. Ardrossan Harbour Company, under Act 1886. P. NC. THW. 11h 45m ; Sp. rise 10ft ; N. rise 8ft. W. prev. SW. and are most dangerous. Rys. G., S.W. & C. Tr.—I. Iron ore, limestone, pig-iron, &c. ; E. Coal, pig-iron, &c. LV. Vessels drawing 21ft can enter and leave at HWST. ; in one or two cases they have left drawing as much as 22½ft (they could of course have entered as well), and they can enter or leave at LWST. drawing 12ft. ; vessels of 1,200 reg. tons may be considered the maximum size that can be accommodated, though there have been one or two in the harb. of 1,700 reg. tons. Accn., an outer breakwater, in the inside of which there is a 20-ton steam crane, and a berth where a vessel 280ft in length could load to 21ft ; and a wet dock with an entrance 38ft wide and 18½ft deep at HWST., having an area of about four acres, and with twelve steam cranes for shipping or discharging coals, pig-iron, ores or goods, as also quayage for the storing of pig-iron, &c. There is also an inner harb. on the inner and E. side of the wet dock. This harb. is closed, being converted into a wet dock of about 9 acres in extent, with 18ft. at LW., which will be opened in 1890 or 1891.

Dry Docks, &c.	Length.	Width.	Depth of OHW.	H. of T.		Owned by.
				Sp.	N.	
	ft.	ft. in.	ft.	ft. in.	ft. in.	
Dry dock	260	38 0	12 to 16	18 6	14 6	{ Ardrossan Shipbuilding Co.
Patent Slipway..	150	38 0	—	18 6	14 6	

Charges.—Dues on vessels vary, 15 tons and over 3d reg. ton and boat's assistance 1½d reg. ton. Dues on goods 2d to 6d, and dues on sundries from 2d to 6d. Cranes to 25 tons.

Towage.—All vessels up to 250 reg. tons, per ton 2d ; from 250 to 500, 2½d ; from 500 upwards 3d reg. ton (chargeable within the W. point of the Horse Isle on the Little Cumbræ). Beyond the limits as per agreement.

Officials.—Man. for the Props., J. Craig ; Dock and Harb. Master, R. Shields ; Coll. of Dues, R. Hendrick ; Coll. of H. M. Cust., S. Lyall.

Hotels.—"Eglinton Arms" and "Railway."

ARINAGOUR, Island of Coll. Lat. $59^{\circ} 10' N$; long. $6^{\circ} 30' W$. TWH. 5h 41m. D. Dry at LW. Sp. rise 12½ft ; N. 9½ft. There is a stone pier and slip at this place, and an anchorage for boats drawing 5ft or 6ft. A leading wind is required to enter from the E.

ARKLOW, Co. Wicklow, Ireland. On the Avoca. Lat. $52^{\circ} 53' N$. long. $6^{\circ} 10' W$. Pop. 5,000. Ry. D.W. & W. THW. f. and c. 8h om. Auth. Trustees under Act of Parliament 1882. Accn. A river 180ft wide, with D. from 6ft to 10ft. Tide flows very little on this coast. Crane power to 5 tons. W. prev. SW. round by S. to SE. LV. 352 tons.

Charges.—On vessels 6d per ton; coal, pyrites, iron ore, and ochre, 3d per ton; timber, 4d per ton; salt, artificial manures and phosphates, 6d per ton.

AROS, Island of Mull, Argyleshire. Lat. $56^{\circ} 40' N$; long. $6^{\circ} 0' W$. In the Sound of Mull, 6 miles from Tobermorey. THW. 5h 58m. A small fishing station, having a pier for steamers.

ARTHURSTOWN, Co. Wexford. A small fishery harbour on the river Suir, opposite Passage East.

ARUNDEL.—See Littlehampton. THW. f. and c. 11h 35m.

ASKEATON, Ireland. A small harb. on the river Shannon, near Foynes.

AUBIN, ST.—See Jersey.

AVONMOUTH.—See Bristol.

AXMOUTH, Devonshire. At the mouth of the Axe. Lat $50^{\circ} 42' N$; long. $3^{\circ} 2' W$. Auth. Owner, W Trelawney Hallett, of Stedcombe House, Axminster. Regulated by Act 11 Geo. IV., 1830. THW. f. and c. 6h 33m. D. on bar 4ft LWST., 12ft to 14ft HWST. Harb. dries at LW. W. prev. SE. and SW. Quayage about 440 yards.

Charges.—Over 10 tons 2d per ton, and 2d per month for laying up. Rates upon goods as per schedule to Act.

Hotel.—Nearest at Seaton, half a mile distant.

AYMOUTH, Berwickshire, Scotland, 6 miles N. of Berwick. A small harb. for fishing vessels.

AYR, Ayrshire, seaport. Lat. $55^{\circ} 28' 10'' N$; long. $4^{\circ} 38' 10'' W$. Pop. 20,821. Auth. Harbour Trust. P. NC. THW. 11h 50m; Sp. rise $8\frac{1}{4}$ ft; N. rise $7\frac{1}{4}$ ft. D. on bar 20ft and 12ft at entrance. New dock sills ST. 22ft., N. 19ft. Ry. G. & SW. Tr.—Large import and export of minerals. The harb. is formed by the river Ayr, which falls into the sea between piers, having the entrance sheltered by a breakwater with an opening 320ft wide, facing NW by W. The banks of the river are quayed on each side from the bridge seaward, and afford about 1,200 yards of wharfage. There is a wet dock to the N. of the harb., with an area of 8 acres, in which vessels drawing 18ft to 20ft can be kept afloat. Good warehouses, steam cranes to 25 tons, and every facility, Special appliances for the shipment of coals. There is also a patent slipway, 800ft long \times 60ft wide, and shear legs lifting 50 tons H. of T. ST. 20ft; N. 17ft 6in.

Charges.—Harb. rates, 2d to 4d reg. ton. Anchorage from 1/ for vessels of 20 reg. ton to 10/ for vessels of 500 reg. ton and upwards. Rates for planks and shutes 6d to 2/. Rates on goods, shipped, unshipped, or transhipped, from 1d to 1/, and 5/ for gunpowder.

Pilotage.—District. Into and out of the harb. of Ayr to a safe distance at sea, say three miles. Rates. Vessels engaged in the coasting trade 1d ton. Vessels engaged in the foreign trade $1\frac{1}{4}$ d ton.

Towage.—40 reg. tons and upwards into or out of the harb., from or to half a mile beyond the present pierhead of the harb. 1d reg. ton; from one berth in the harb. to another $\frac{1}{2}$ d reg. ton.

Officials.—Sec. to Trust., William Pollock; Harb. Master, P. Barr; Coll. of Harb. Dues, J. McHutchison; Coll. of H.M. Cust., F. Franklin.

Hotels.—"The Station," "King's Arms," "Queen's," and "Ayr Arms."

BADACRO HARBOUR, Loch Gairloch, Rosshire. Lat. $57^{\circ} 40' N$; long. $5^{\circ} 42' W$. A fish-curing station, having a sheltered little basin, much frequented by small craft.

BAGILLT, Flintshire (see Chester). Lat. $53^{\circ} 17' N$; long. $3^{\circ} 12' W$. Ry. Chester & Holyhead. Auth. Owners, Walkers, Parker & Co., Ltd. THW. f. and c. 11h 58m W. prev. SW. and NE. There is about 2ft at LW., and 13ft 3in at HWST. Used principally by Messrs. Walker's vessels, steam cranes, and goods wharves.

Charges.—Various, from 4d per ton.

BALBRIGGAN, Co. Dublin (see Dublin). Lat. $53^{\circ} 36' 45'' N$; long. $6^{\circ} 10' 40'' W$. Ry. G.N. (I.) Auth. Dublin Port and Docks Board, under Act 30, Vict., c. 23, and the Piers and Harbours Confirmation Act, 1867. THW. f. and c. 10h 40m. Harbour dries at LW. D. at HWST. 10ft. Used principally by vessels drawing up to 8ft. Quayage 684yds. Tr.—Muslin, embroidery, and hosiery, fisheries, &c.

Charges.—6d per ton on vessels. Ballast 1/ per ton, gas light 1d per ton.

Officials.—See Dublin. Harb. Master, R. McCowan.

BALCARRY (Kirkcudbright). A sheltered anchorage and life-boat station on the Solway Firth.

BALLANTRAE, Ayrshire, at the mouth of the Stinchar. Lat. $55^{\circ} 7' N$; long. $5^{\circ} 2' W$. Pop. 600. Post-town, Girvan. A small harb., dry at LW., with stone pier, having D. of 8ft HWST. THW. f. and c. 11h 28m.

BALLINA, Co. Mayo, Ireland. Situated at the mouth of the Moy, Killala Bay. Lat. $54^{\circ} 10' N$; long. $9^{\circ} 15' W$; Pop., with its suburb Ardnaree, 5 800. Auth. River Moy Commissioners, by Statute, 1860. THW. f. and c. 5h 15m. D. 5ft LWST., and 16ft HWST. LV. 350 tons.

Charges.—Harb. dues. On vessels to or from home ports, a sum not exceeding 6d per ton; on vessels to or from foreign ports, a sum not exceeding 8d per ton.

Pilotage.—2/ per foot in dft. for vessels from or for home ports; 3/ per foot in dft. for vessels from or for foreign ports.

Officials.—Sec., R. W. Joynt; Harb. Master, J. Hately.

BALLINACOURTY—See Dungarvon.

BALLINACURRA.—See Cork.

BALLINTOY, Co. Antrim, Ireland. Between Coleraine and Rathlin Island. Lat. $55^{\circ} 7' N$; long. $6^{\circ} 30' W$. Nearest Railway Station, Ballycastle. Auth. F. Herdman, Esq., of Lisburn. THW. f. and c. 6h 28m. Accn. Area about 2,380 sq yds. Quayage 300ft frontage. LV. Steam lighters of 100 tons. Don Bar 6 $\frac{1}{2}$ ft LWST. and 10 $\frac{1}{2}$ ft HWST. Crane power to 2 tons.

Charges.—6d per ton on vessels.

Officials.—Gen. Man. and Sec., W. A. Donald ; Harb. Master, John MacHendry.

Hotels.—"Boyd Arms," Ballycastle ; "Commercial," Bushmills.

BALLYCASTLE, Co. Antrim, Ireland, near the Fair Head.

Lat. $55^{\circ} 16' N$; long. $6^{\circ} 32' W$. Pop. 1,600.

Auth. Owner, Lady Boyd. **THW.** f. and c. 6h 42m. Dock choked up with sand. A new jetty has been constructed at which vessels drawing 20ft discharge in moderate weather. **W.** Sheltered from NE. and NW. There are dangerous currents between Rathlin Island and the mainland. **Tr.**—Coasting vessels bringing coals, slate, timber, &c. No harb. dues.

Official.—Agent to Owner, J. B. Johnstone.

BALLYCOTTON, Co. Cork, Ireland. Lat. $51^{\circ} 49' N$; long.

$7^{\circ} 59' W$. Pop. 350. **THW.** f. and c.

5h 38m. A small pier. Harb. dry at **LW.**, affording protection to fishing vessels and coasters.

BALLYCROVANE, Harb. in Kenmare Bay, Co. Kerry, Ireland. An anchorage in about 4 fms.

BALLYSHANNON, Co. Donegal, Ireland. Lat. $54^{\circ} 31' N$; long. $8^{\circ} 2' W$. At the mouth of the

Erne. **THW.** 5h 18m. **D.** on bar 3ft **LWST.**, and 6ft **LWNT.** ; 13ft **HWSI.**, and 10ft **HWNT.** Channel is about 110 to 150 yds wide, with depth of about 12ft, except near the Bar ; and 18 to 20ft at wharves, **LW.** **Auth.** Harb. Trust., under Act, 1886. **En.** occasionally difficult, but undergoing improvements.

Charges.—On vessels, 2d per ton reg. ; on cargo, 3d to 4d per ton.

Pilotage.—Coasters 2/6 in, 2/0 out, per foot dft. ; foreign 3/6 in, 3/ out, per foot dft.

Official.—Sec. to Harb. Trust., Edward Lynch.

Hotels.—"The Imperial," "Commercial," and "Railway."

BALLYSODARE, Co. Sligo, Ireland. Lat. $54^{\circ} 18' N$; long.

$8^{\circ} 25' W$. A small port on the coast of

Connaught, with secure anchorage for two or three small vessels in Porthcurry Pool in 13ft **LW.** **THW.** f. and c. 6h 35m. No harb. authority.

BALMERINO, Fifeshire. River Tay. Lat. $56^{\circ} 25' N$; long

$3^{\circ} 2' W$. Pop. 800. **Auth.** Owner, E. A.

Stuart, Kinfauns Castle. **Rys.** N.B. **THW.** f. and c. 2h 44m. There is a stone pier, 120ft long, connected with a timber jetty, with about 10ft at **HWST.** alongside. **D.** Dry at **LW.**

BALTIMORE, Co. Cork, Ireland. Lat. $51^{\circ} 27' N$; long.

$9^{\circ} 16' W$; about 5m NE. from Cape Clear.

Pop. 150. **THW.** f. and c. 4h 23m. An anchorage for vessels drawing up to 18ft. In the reign of Charles I., 1631, this town was plundered by Algerine pirates, who carried above 200 of the inhabitants into slavery. No harb. dues.

Official.—John Brown, Harb. Constable.

BAMBOROUGH, Northumberland, 15m SE. from Berwick-on-Tweed. Pop. 4,000. The keep

of the castle—said to have been built by Ina, King of Northumbria, in 548—is used as a refuge for shipwrecked sailors.

BANDON QUAY (see Kinsale), Co. Cork, Ireland. Lat. $51^{\circ} 44' N$; long $8^{\circ} 43' W$. Situated 7 miles from the mouth of the Bandon River. Ry. Cork, Bandon & South Coast Ry. Auth. Kinsale Harb. Commissioners, by Kinsale Harb. Orders, 1870 and 1874. THW. f. and c. 5h 18m. D. alongside quay $8\frac{1}{2}$ ft HWST., on bar 13ft LWST.; Sp. rise 12ft, and N. 10ft. Vessels have often to wait many days to discharge and load, at the above named quay, but can discharge at the New Pier at Kinsale at all times. Tr.—I. Coal, corn, timber, and salt; E. Corn, timber, and pitwood. W. prev. SW. LV. 200 tons.

Charges.—On vessels 1d per ton reg.

Officials.—Sec., M. Hegarty; Harb. Master, E. Barrett.

Hotel.—"Barrett's Restaurant."

BANFF, Banffshire. Lat. $57^{\circ} 40' N$; long. $2^{\circ} 31' W$. Pop. 4,200. Auth. Harb. Trust., under Act of Parliament, 3 and 4 Vict., c. 114. P. NC. THW. f. and c. oh 28m; Sp. rise $10\frac{1}{2}$ ft; N. 8ft; R. of N. $5\frac{1}{2}$ ft. W. prev. W., most dangerous from NW. to NE. Ry. G.N. (S.) Tr.—I. Coal, lime, timber, iron, stones, and general goods; E. Timber, corn, herrings, &c. The outer entrance has a width of 45ft. LV. It is supposed the LV. that ever entered at any time of tide was a light steamer of about 500 tons gross reg. No vessels can enter at LW. of ST. except at times a few boats. The harb. consists of an inner and outer basin; the area within the walls is about 4 acres. There is entire safety in the inner basin, 300ft \times 230 ft, with 1,600ft of quayage; but in LT. loaded vessels can only enter outer basin, 290ft \times 190ft, where they discharge part cargo. At NT. vessels drawing not more than $10\frac{1}{2}$ ft can enter outer basin, and at ST. $13\frac{1}{2}$ ft, or about, according to direction of W. and state of sand; and vessels can enter inner basin at NT., drawing $8\frac{1}{2}$ ft, and at ST. $10\frac{1}{2}$ ft, varying as before mentioned. Morton's Patent Slipway is 80ft long \times 27ft wide. H. of T. ST. 12ft to 16ft; N. 10ft to 13ft. Crane, and other accommodation.

Charges.—Harb. dues inwards and outwards 1d reg. ton. Water and pier lights about 1d reg. ton. Berthing dues 1/ to 2/6. Plankage 6d for each plank.

Pilotage.—District not defined. **Rates.** Inwards or outwards 2d ton.

Towage.—Boat with kedge and warp 5/ per vessel.

Officials.—Clerk to Harb. Trust., J. Smith; Harb. and Shore Master, R. Sheriff; Berthing Master, G. Macdonald.

BANGOR, Carnarvonshire. Lat. $53^{\circ} 13' N$; long. $4^{\circ} 8' W$. Pop. about 7,000. Ry. Chester & Holyhead THW. f. and c. 9h 38m. D. 17ft HWST., and 11ft HWNT. Accn. Tidal basin 320ft long \times 50ft, with 690ft of quayage. There is about 500ft quayage outside tidal basin. Tr.—Exporting slates.

Charges.—Under 50 tons burden or dead weight to 100 tons and upwards, 2/ per vessel.

Official.—E. A. Young, Harb. Master.

Hotels.—"Albion," R. G. Fritchard; "Castle," John Denman.

BANGOR, Co. Down, Ireland. Lat. $54^{\circ} 39' N$; long. $5^{\circ} 40' W$.
 Pop. 2,500. Ry. B.H.B. Auth. Owner, R. E. Ward, Bangor Castle, Co. Down. THW. f. and c. 11h 8m. There is no bar. Accn. consists of 7 berths for vessels up to 140 tons besides berths for smaller vessels. Harb. dries at LW. D. 17ft HWST. There is a pier and landing stage for steamers plying to Belfast. A new harb. is about to be constructed.

Charges.—2d per ton on vessels, 1/ per standard on deals. Timber of all kinds, except deals, 2d per load. Flour 3d per ton. Meal $1\frac{1}{2}$ d, 3d per ton on potatoes, $1\frac{1}{2}$ d on coals and bricks; 4d per M on slates; $1\frac{1}{2}$ d per ton on iron; $3\frac{1}{2}$ d on lead and all other or.s; 1d on rock salt; $1\frac{1}{2}$ d on slates.

Official.—Hon. Somerset Ward, Bangor Estate Office, Downpatrick; J. Tregaskis, Harb. Master.

BANNOW, Co. Wexford, near the submerged town of Bannow. There is a little shipping business here in connection with the Land Reclamation works, but no harbour. D. 15ft HWST., 10ft HWNT.

BANTRY, Co. Cork, Ireland. Lat. $50^{\circ} 40' N$; long. $9^{\circ} 45' W$.
 E. coast of Bantry Bay. Ry. West Cork Ry. THW. f. and c. 3h 47m. There is no harb. authority. Bantry Bay, 25m long \times 6 to 8 broad, includes Whiddy and Glengariff harbs., and affords security and anchorage to the largest vessels. Other harbs. in this bay—Adrigle, Castletown, Berehaven, and Kitchen Cove—offer suitable accommodation for smaller vessels.

Official.—E. Harrington, Harb. Constable.

BARKING, Essex. On a creek of the Rother, River Thames. Ry. L.T. & S. Small trade in timber and fish.

BARKS-UNDER-CLIFF.—See Laugharne.

BARLOCHAN.—See Dumfries and Palnackie.

BARMOUTH, Merionethshire. Lat. $52^{\circ} 40' N$; long. $4^{\circ} 5' W$;
 Ry. Cam. Pop. 2,000. Auth. Harb. Board, under Statute Geo. III., 1796. A small tidal harb., with about 410ft of quayage. D. 13ft HWST. Dry at LW. THW. f. and c. 7h 41m.

Official.—John Lewis, Harb. Master.

BARNPOOL, Plymouth. Berthage for ships of the Royal Navy.

BARNSTAPLE, Devonshire. On the river Taw, 34m NW. of Exeter. Lat. $51^{\circ} 7' N$; long $4^{\circ} 4' W$.
 Pop. 12,400. Auth. Town Council of Barnstaple, and Rollesquay, Hon. Mark Rolle. P. NC. THW. 6h 28m; Sp. rise $10\frac{1}{2}$ ft; N. rise 5ft. D. on bar generally 4ft LWST. in harb., ST. 10ft to 14ft; NT. 5ft. W. prev. SW. to NW., chiefly the latter. Rys. G.W. (Devon and Som.) and L. & S.W. Tr.—I. Coal, manure, oil-cake, grain, timber, &c.; E. Clay, timber, pitwood, flour, &c. LV. 130 tons burthen (coaster). Accn. Barnstaple Quay, depth 10ft Av. ST.; area of great quay, for vessels, below bridge 1,800ft, and above bridge, for barges and boats 2,000ft; dry docks at Appledore, the New Quay Dock, and Richmond Dock. A good patent slipway, and shipbuilding yard.

Charges.—Harb. dues 4d per vessel. Light dues $\frac{1}{2}$ d reg. on.

Pilotage.—District not defined. **Rates.** By agreement.

Towage.—4d reg. ton.

Officials.—Town Clerk, J. Bosson ; Agent to Rolle Estate, R. H. Lipscombe, Tonington, N. Devon ; Harb. Master, Capt. Richard Bament ; Coll. of H.M. Cust., J. Barry.

Hotels.—"Royal" and "Fortescue," N. Saxon ; "Golden Lion," Mrs. A. Marsh ; "Trevelyan" (Temperance), Mrs. J. S. Keirle ; "King's Arms," W. Tarr.

BARROW-IN-FURNESS, Lancashire. On the Walney Channel, 3½m above Piel Harb. Lat. 54° 3' 30" N ; long. 3° 10' W. Pop. 47,100. Auth. Furness Ry. Co., under Furness Co.'s Acts of Parliament. P. C. THW. Duddon Bar, f. and c. 10h 54m ; Sp. rise 28 ft ; R. of N. 14 ft. D. on bar OST. 30ft ; NT. 23ft. W. prev. W. and SW. Ry. F. Tr—I. General merchandise, grain, timber, pig-iron, &c. ; E. Iron and general merchandise. LV. at any time of tide *City of Rome*, 8,450 tons, and LWST. *Manx Queen*, 567 tons. Docks :—

	Area.	Depth on Sill.		Length.	W. of E.
		HWOST.	Neaps.		
	Acres.	ft.	ft.	ft.	ft.
Devonshire	30	25	18	500	60
Buccleuch	3½	—	—	—	80
Ramsden	65	31½	24	900	100

Ramsden Dock lock has an area of 2 acres, the half-tide basin 8 acres, with entrances 100ft wide in each case. Excellent warehouse and every Accn. for a large trade. Foreign animals wharf, chill rooms, and quayage space about 5m in length. Cranes from 1½ to 100 tons. Parts of graving docks, &c. :—

Name.	Extreme Length.	W. of E.	Depth at OHW.	H. of T.	
				Sp.	N.
	ft.	ft.	ft.	ft.	ft.
Graving Dock	500	60	20	25	14½
Depositing Dock	240	40	Any dft.	—	—
Ashburner's Slip	250	27	—	15	5
Furness S. Company's Slip	200	20	—	14	4

The Depositing Dock is capable of lifting ships of 3,500 tons weight in about 30 minutes, and is provided with two gridirons for the depositing of vessels. By means of this dock a ship can be raised, cleaned, painted, and lowered again into the water in 24 hours.

Charges.—Dock dues from 3d to 1/ reg. ton. Harb. dues (payable by vessels entering within the limits of the harb. but not going into dock) from 1½d to 1/ reg. ton. For every vessel entering or leaving the harb. or docks without delivering or loading a cargo, half of the above rates are charged. Tolls on passengers 1d each. Dock rates on goods and cattle 1½d to 1/. Rates for loading cargoes 2d to 1/6. Rates for discharging cargoes 6d to 1/6. Wharfage on quays.

Pilotage.—District. From sea (that is, Morecambe Bay Light-ship) into and out of the harb. and along the coast from Formby

Point to Haverigg Point of Duddon. Rates on vessels employed in the oversea trade :—

	Under 200 tons reg.	200 tons and under 600 tons reg.	600 tons and under 1,000 tons reg.	1,000 tons reg. and upwards.
	foot. s. d.	foot. s. d.	foot. s. d.	foot. s. d.
From within lines from Morecambe Bay Lightship to Formby Point and Haverigg Point respectively to the Docks at Barrow, and <i>vice versa</i>	6 0	8 0	9 0	10 0
From within lines from Morecambe Bay Lightship to Formby Point and Haverigg Point respectively to the Anchorage at Piel or the Wyre Lighthouse, and <i>vice versa</i> ..	4 6	6 0	7 0	8 0
From within a line with Black Comb, bearing NNE., and outside Hilpsford Buoy to the Docks at Barrow, and <i>vice versa</i>	4 0	5 0	6 0	7 0
From within a line with Black Comb, bearing NNE., and outside Hilpsford Buoy to the Anchorage at Piel or the Wyre Lighthouse, and <i>vice versa</i>	2 6	3 0	4 0	5 0
From Hilpsford Buoy, or within the same, to the Docks at Barrow, and <i>vice versa</i>	2 6	3 0	4 0	5 0
From Hilpsford Buoy, or within the same, to the Anchorage at Piel, and <i>vice versa</i>	1 0	1 6	2 0	2 6
From within Piel Anchorage to the Docks at Barrow, and <i>vice versa</i> ..	1 6	2 0	2 6	3 0
From Wyre Lighthouse to the Docks at Barrow, and <i>vice versa</i>	4 0	5 0	6 0	7 0
From Wyre Lighthouse to the Anchorage at Piel, and <i>vice versa</i> ..	2 6	3 0	4 0	5 0
From north of a line from Morecambe Bay Lightship and Walney Light, and inside the NNE. line, to Wyre Lighthouse, and <i>vice versa</i> ..	2 6	3 0	4 0	5 0
From south of a line from Morecambe Bay Lightship and Walney Light, and inside the NNE. line, to Wyre Lighthouse, and <i>vice versa</i> ..	2 0	2 6	3 0	4 0

On vessels employed in the coasting trade one-half of these rates. Additional rate, for intermediate portions of a foot dft., as follows, viz.:—For 3 inches and under, no addition; for more than 3 inches and under 9 inches, the medium between the two rates; for 9 inches and upwards, the rate for the next foot. For transporting ships from one berth to another within harb. 10/6. If a master employ a pilot whilst at anchor, the lay days to be 7/6 per day. Coasting steam vessels making more than one voyage per week pay half these rates.

Towage.—Between—	Reg.	Ton.	Minimum.
Barrow Docks and Pile Light	d.	£	
Barrow Docks and Pile Light	1	½	
„ „ Piel	2	1	
„ „ Hawse Point	2½	2	
„ „ Hilpsford Buoy... ..	3	3	
„ „ Lightship	5	7	
Piel and Hawse Point	1	1	
„ Hilpsford Buoy	2	2	
„ Lightship	4	6	

For use of tug for vessels going into or coming out of graving dock 1d ton, minimum £1 (including towage both ways, and the extra dock towage required). To moor or unmoor vessel, &c., £2 for the first hour, and £1 for each additional hour or part of hour; minimum £2. For towing from tidal basin to channel or *vice versa* ½d ton. For towing coasters not exceeding 150 tons from channel to berth, or *vice versa*, ½d ton. Between basin or lock and Ramsden Dock ½d ton each tow; between basin or lock and Buccleuch or Devonshire Dock ½d ton each tow. From one berth to another in docks ½d ton each tow. For use of dock tug for swinging £1 for the first hour and 10/ for each additional hour or part of an hour; minimum £1. For use of outside tug for swinging £2 for the first hour, and £1 for each additional hour or part of hour; minimum £2. Steamers without steam charged on the gross tonnage; steamers under steam charged half the above tonnage rates on net tonnage. The use of the tug is optional. The above charges do not apply to salvage services. For use of tow-ropes: dock tug 5/ each tow; other tugs 10/ each tow in dock; docks to Piel 10/; docks to Hilpsford £1; docks to lightship £2. Vessels under 300 tons reg. half the above charges. Any towing services not comprised in the above must be specially arranged for with the harb. master. Masters of vessels in dock requiring tugs should make application at the harb. office, and, if outward-bound, should prepay. Vessels take their turn for tugs in the order in which they book, except in special cases.

Officials.—Sec. and Man., H. Cook; Harb. Master, Captain Barnett, R.N.; Coll. of H.M. Cust., J. T. Hynes.

Hotels.—"Duke of Edinburgh," Josiah Twiss; "Imperial," Edwin Hinks.

BARRY ISLAND, Port of Cardiff, Glamorgan, Wales. Lat. 51° 22' N; long. 3° 16' W. Rys. Barry Dock Ry., 27½ miles, connecting the Dock with the colliery districts and with the G.W., T.V., and other systems. THW. f & c 6 50. Auth. Barry Dock and Railways Company, under Barry Docks Railways Act, 1884. Accn. Tidal dock, 73 acres; tidal basin, 7 acres. Length of quayage in dock, 10,500ft; ditto in basin, 2,040ft. D. at HWST. 37ft 7in, LWST. 1ft 6in, HWNT. 29ft 3in, LWNT. 9ft 7in. The available depth of water is some 3ft more than given above, but the sills being curved, the above will be taken as the working depths for flat-floored vessels. Accommodation for largest vessels afloat. Dimensions of docks:—Length 3,400ft, width 1,100ft; basin, length 600ft width 500ft; timber pond, 24 acres. Dry docks of the most modern construction, one being 724ft in length, divided into two sections. Hydraulic cranes of most modern construction; 11 high level coal staiths, also low level staiths, and movable staiths and cranes.

Dock Charges. Same as Cardiff and Penarth, but no corporation, town, or harbour dues.

Pilotage. Optional.

Towage. Reasonable.

Officials. Secretary, G. C. Downing; Manager, R. Evans; Dock Master, R. Davies; Coll. of Customs, Cardiff Collector.

Hotels. Island Hotel, Barry Island; Wemoe Arms Hotel, Cadoxton; Royal Hotel, Cadoxton; Ship Hotel, Barry.

BARTON-ON-HUMBER, Lincolnshire. Lat. $53^{\circ} 41' N$; long. $0^{\circ} 26' W$. Rys. M.S. & L.

A small port on the S. side of the Humber, below Hull.

BEADNELL, Northumberland. Lat. $55^{\circ} 34' N$; long. $1^{\circ} 37' W$. A creek under port of Berwick. D. HWST. 6ft.

Official.—E. Forrester, Harb. Master.

BEAULY. A creek under port of Inverness. Pop. 900. D. HWST. 13ft; HWNT. 8ft.

Official.—J. Mackenzie, Harb. Master.

BEAUMARIS, Anglesea, Wales. On the Menai Straits. Lat. $53^{\circ} 18' N$; long. $4^{\circ} 2' W$. Pop. 2,240. Auth.

The Corporation, under Charter of Edward I. P. NC. THW. f. and c. 10h 28m; Sp. rise $22\frac{1}{2}$ ft; N. rise $15\frac{1}{2}$ ft. D. at the quay, ST. 16ft; N. 9ft. Ry. L. & N.W. Tr.—I. Timber and grain; E. Slates and slabs. Accn. natural harb.; no warehouse accommodation.

Charges.—Harb. dues, for every smack under 20 reg. ton. 1; above 20 and under 40, $1/6$; 40 tons and upwards $2/6$. For every vessel or schooner with two masts under 40 tons, $2/$; 40 tons and upwards, $3/$. Every vessel not under British flag $6/8$.

Pilotage.—District. From Port Dinorwic or Moel-y-Don through the Swellies to a line drawn from Great Orme Head to Point Linas and *vice versa*. N.B.—No master of a vessel is compelled to take a pilot within this district, except on coming in or going out of port. **Rates**:—

For Vessels drawing

f
f
f

From Cadnant to Port Dinorwic, and *vice versa*: Vessels drawing 7ft water and under $4/$; more than 7ft water 9d foot. From Cadnant to Caernarvon (no Caernarvon pilot offering): Vessels drawing 7ft water and under $6/$; more than 7ft water $1/$ ft. Pilots taking vessels into Conway are entitled, in addition to their pilotage, to $7/6$ for returning to Beaumaris. Should the pilot be landed at Great Orme Head, extra $42/$; if taken (out of the limits of his licence) to Chester or Liverpool $63/$; in case the pilot should happen to have charge of the vessel to either of the said places $105/$; $7/6$ per day allowed pilot for every day detained on board.

Towage.—As per agreement.

Officials.—Town Clerk, J. R. Roberts; Harb. Master, F. Hugh Jones; Lessee of Harb. Dues, J. Percy.

Hotels.—"Williams Bulkeley Arms," "Liverpool Arms."

BECCELES, Suffolk. Lat. $52^{\circ} 27' N$; long. $1^{\circ} 35' E$: situated on the river Waveney, 15m from Lowestoft.

Ry. G.E. Auth. Owners, the Town Council of Beccles. The harb., area 3,200 sq yds, is a small cut in the river, into which

coasters and small craft enter. **D.** at **LW.** 5ft to 6ft. **THW.** f. and c. same as at London Bridge.

Charges.—Wharfage, grain and timber 3d per last, coals 1d per ton.

Official.—Coll., J. B. Sprunt.

BELFAST, Antrim. At the head of Belfast Lough, and at the outlet of the river Lagan. Lat. $54^{\circ}42'N$; long. $5^{\circ}55'W$. **Pop.** 250,000. **Auth.** Harbour Commissioners, under Acts from 1847 to 1883. **P. C.** **THW.** f. and c. 10h 43m; Sp. rise $9\frac{1}{2}$ ft; N. rise 8ft. **W.** prev. for nine months of the year are from S. veering W. to NW., and for three months in the spring from NE. to SE. The harb. is at all times safe and easily accessible. **Rys.** B. & N.C.; B. & Co. Down; B. H. & B. G.N. (I.) **Tr.**—I. Coal, cotton, flax goods, grain, flour, timber, iron, provisions, drugs, &c.; E. Linen, goods, iron ore, hides, rock salt, &c. **LV.** which have entered at any time of tide were, until lately, those engaged in the timber trade from N. American ports, and the ship *Queen of the West*, of 1,432 reg. ton., was the largest. Since the year 1870 the largest vessels have been those in the grain and flour trade, and were chiefly from American ports. The most recent and marked change in the vessels in this, as well as in other trades, has been that from sailing vessels of 1,200 to 1,800 tons to steamers of similar tonnage. The largest vessels which enter at **LW.** of **ST.** are steamers about 400 to 600 tons, employed in the general coasting trade, and also in the trade with Continental ports, but vessels of 2,500 tons enter at **HW.** **Accn.** The harb. for ships and boats is $8\frac{1}{2}$ m long. The area of the docks and basin is about 101 acres. The depth in the river is 16ft at ordinary or average **LT.** Dufferin Dock, a floating dock with one pair of gates (no lock) is 630ft long \times 225ft wide, has a water area of $3\frac{1}{2}$ acres and 1,645ft of quayage length. Average depth of water 23ft; depth on sill of entrance 14ft at ordinary or average **LT.** Spencer Dock is a tidal dock 600ft long \times 550ft wide; water area $7\frac{1}{2}$ acres, and quayage of 1,900 lin. ft. Average depth of water 16ft at ordinary or average **LT.** Entrance (which has neither sill, lock, nor gates) 265ft long \times 8cft wide. The Dufferin Dock opens from this dock, and on the river side of the Spencer Dock is formed the Milewater Basin, comprising an area of 5 acres of water, and a quayage of 6c0ft. The Abercorn Basin is a rectangular basin, having three sides, 725ft long \times 635ft depth broad; water area $12\frac{1}{2}$ acres; quayage of 1,370 lin. ft. Average 15ft at **LT.** Albert Quay is a river quay, 2,100ft long, having 12ft of water at ordinary or average **LT.** Queen's Quay is a river quay 2,100ft long. Donegal Quay is a river quay 3,300ft long. Lands reclaimed from the sea are in extent, on the Co. Down side of the river, about 165 acres, and on the Co. Antrim side about 100 acres. Total quayage space is about 16,738 lin. ft. The river space, which is practically a dock, is about 60 acres. Graving docks, &c. :—

Name.	Length.	Width.	Depth on Sill OHW.	
	ft.	ft.	ft.	in.
Graving Dock, No. 1.	252 $\frac{1}{2}$	30	8	3
Do. " 2.	299	36	10	0
Hamilton Graving Dock	470	60	15	7
Belfast Patent Slip	560	78	—	—
Alexandra Graving Dock	800	80	25	—

Excellent warehouse accommodation in close proximity to quays. Cranes—two 1 ton, fifteen 2 tons, one 25 tons, one 50 tons, one 70 tons. Steam derrick, 100 tons.

Charges.—Tonnage dues 1d to 4d reg. ton. Quayage $3\frac{1}{2}$ d reg. ton. on vessels. Lighters 5/ each. Ballast 1/ per ton. Plankage 1/6 for each plank. Portage. Cranage as per schedule.

Pilotage.—District. Larne Harbour, County Antrim, to Ballyhalbert Bay, County Down. Rates:—

HARBOUR PILOTAGE.

Registered Tonnage.	INWARD.											
	On Vessels not Steamers.				On Vessels being Steamers.				On Vessels towed by			
	If boarded seaward of line from Seapark House to Craigavad House.	If boarded at entrance of Victoria Channel.			House.	If boarded			at	If boarded at entrance of Victoria Channel or at Holywood Lighthouse.		
and	£	s	d	£	s	d	£	s	d	£	s	d
30 under 40	0	5	0	0	5	0	0	5	0	0	5	0
40 " 50	0	6	3	0	6	3	0	6	3	0	6	3
50 " 60	0	7	0	0	7	0	0	7	0	0	7	0
60 " 70	0	8	0	0	8	0	0	8	0	0	8	0
70 " 80	0	10	0	0	10	0	0	10	0	0	10	0
80 " 90	0	11	3	0	11	3	0	11	3	0	11	3
90 " 100	0	12	0	0	12	0	0	12	0	0	12	0
100 " 110	0	13	0	0	13	0	0	13	0	0	13	0
110 " 120	0	15	0	0	15	0	0	15	0	0	15	0
120 " 130	0	17	0	0	17	0	0	17	0	0	17	0
130 " 140	0	19	3	0	19	3	0	19	3	0	19	3
140 " 150	1	1	3	0	15	0	0	14	0	0	10	0
150 " 160	1	2	0	0	16	0	0	15	0	0	10	0
160 " 175	1	3	0	0	17	0	0	16	0	0	11	0
175 " 200	1	5	3	0	18	0	0	17	0	0	12	0
200 " 225	1	8	0	1	0	0	0	15	6	0	13	3
225 " 250	1	9	3	1	1	0	0	16	0	0	14	0
250 " 275	1	10	0	1	2	0	0	17	0	0	15	0
275 " 300	1	12	0	1	3	0	1	18	0	0	16	0
300 " 325	1	15	0	1	5	0	1	19	0	0	17	0
325 " 350	1	17	0	1	6	0	1	20	0	0	18	0
350 " 375	1	18	0	1	8	0	1	21	0	0	19	0
375 " 400	2	0	0	1	9	0	1	22	0	0	20	0
400 " 450	2	2	0	1	10	0	1	23	0	0	21	0
450 " 500	2	5	0	1	12	0	1	24	0	0	22	0
500 " 600	2	10	0	1	16	0	1	27	0	0	25	0
600 " 700	2	15	0	1	19	0	1	30	0	0	28	0
700 " 800	3	0	0	2	3	0	2	33	0	0	31	0
800 " 900	3	5	0	2	6	0	2	36	0	0	34	0
900 " 1000	3	10	0	2	10	0	2	40	0	0	38	0
1000 " 1100	3	15	0	2	13	0	2	43	0	0	41	0
1100 " 1200	4	0	0	2	17	0	2	47	0	0	45	0
Every additional 100 tons	0	5	0	0	5	0	0	5	0	0	5	0

HARBOUR PILOTAGE.

Registered Tonnage.	OUTWARD.			
	On Vessels not Steamers.	On Vessels being Steamers.	On Vessels towed by Steamers.	On Vessels in Ballast only. (Optional.)
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
30 and under 40	0 5 0	0 3 3	0 3 0	0 3 3
40 " 50	0 6 3	0 4 3	0 4 9	0 4 3
50 " 60	0 7 6	0 5 0	0 5 9	0 5 0
60 " 70	0 8 9	0 6 0	0 6 6	0 6 0
70 " 80	0 10 0	0 6 6	0 7 6	0 6 0
80 " 90	0 11 3	0 7 3	0 8 6	0 6 0
90 " 100	0 12 6	0 8 6	0 9 6	0 7 0
100 " 110	0 13 9	0 9 6	0 10 3	0 7 0
110 " 120	0 15 0	0 10 3	0 11 9	0 7 0
120 " 130	0 17 6	0 11 6	0 13 3	0 7 0
130 " 140	0 19 3	0 13 0	0 14 6	0 8 0
140 " 150	1 1 3	0 14 0	0 16 0	0 8 0
150 " 160	1 2 6	0 15 0	0 17 0	0 8 0
160 " 175	1 3 9	0 15 9	0 17 9	0 9 6
175 " 200	1 6 3	0 18 0	0 19 0	0 9 6
200 " 225	1 8 0	0 18 6	1 1 0	0 11 6
225 " 250	1 9 3	0 19 6	1 2 0	0 12 0
250 " 275	1 10 6	1 0 9	1 3 0	0 12 0
275 " 300	1 12 6	1 1 3	1 4 6	0 13 0
300 " 325	1 15 0	1 3 6	1 6 3	0 13 0
325 " 350	1 17 0	1 4 3	1 7 0	0 14 0
350 " 375	1 18 9	1 6 3	1 9 0	0 15 6
375 " 400	2 0 6	1 7 0	1 10 6	0 16 0
400 " 450	2 2 6	1 8 0	1 12 0	0 17 0
450 " 500	2 5 0	1 10 0	1 13 9	0 18 0
500 " 600	2 10 0	1 13 7	1 17 6	1 0 0
600 " 700	2 15 0	1 16 6	2 1 3	1 2 0
700 " 800	3 0 0	2 1 0	2 5 0	1 4 0
800 " 900	3 5 0	2 3 6	2 8 0	1 6 0
900 " 1000	3 10 0	2 6 6	2 12 6	1 8 0
1000 " 1100	3 15 0	2 10 0	2 16 3	1 10 0
1100 " 1200	4 0 0	2 13 3	3 0 0	1 12 0
Every additional 100 tons	0 5 0	0 3 6	0 3 9	0 2 0

NOTE.—The maximum rate on vessels not having British registers arriving from or sailing on a foreign voyage, £10 16s. ; on vessels with British registers arriving from or sailing on a foreign voyage, £8 2s. ; on vessels not steamers trading to or from a port in United Kingdom, £5 8s. ; on vessels being steamers, £3 5s. 6d.

Limits of Out-Pilotage.—Larne Harbour, Co. Antrim, and Ballyhalbert, Co. Down.

Out-pilots outside the Black Head, or outside the Buoy of the Brigs, to the Whitehouse Roads, of 200 tons or upwards £2 2s. Above 100 and under 200 tons £1 11s 6d ; not exceeding 100 tons £1. Outside the Grey Point, or outside Kilroot Point, of 200 tons or upwards £1 1s ; above 100 and under 200 tons 15/ ; not exceeding 100 tons 10/. Masters of vessel will take notice that the boats of the out-pilots have a white star on the bows.

Towage.—As per agreement.

Officials.—Sec. to Harb. Commrs., W. A. Currie ; Harb. Master and Supt. of Pilots, W. Tate, R.N.R. ; Traffic Man., G. Patrick ; Lloyd's Surv., J. Turpin ; Coll. of H.M. Cust., R. Henderson.

BELLEPORTE, Inverness, Cromarty Firth. D. HWST. 10ft ; HWNT. 6ft ; THW. at f. and c. 12h 15m.

Accom. for 4 vessels.

Charges.—Harb. dues 1d per ton.

Official.—Harb. Master. G. R. Hall.

BELMULLET, Co. Mayo, Ireland. Lat. $54^{\circ} 16' N$; long. $10^{\circ} 0' W$. Auth. the Grand Jury of co. Mayo, under Schedule to the Act 16 and 17 Vict., c. 36. A pier built by the Board of Public Works in Ireland. THW. f. and c. 5h 38m; dry at LW.; 8ft to 9ft at HWS.T. W. prev. SW.

Charges.—None.

Official.—Harb. Constable, E. M. Richards. Pickle Point House.

Hotels.—"Royal" and "Erris."

BENWELL.—See Newcastle-on-Tyne.

BEREHAVEN.—See Castletown and Bantry.

BERWICK-ON-TWEED, Northumberland. Lat. $55^{\circ} 46' N$; long. $1^{\circ} 59' W$. Pop. 14,000. Auth. Harbour Commissioners, under Berwick-on-Tweed Harbours Act, 1862. P. NC. THW. f. and c. 2h 18m; Sp. rise 15ft; N. rise $11\frac{1}{2}$ ft; R. of N. 8ft. D. on bar, ST. 20 to 22ft; N. 14 to 16ft. W. prev. NE. Rys. N.B. and N.E. Tr. —I. Timber, guano, bones, phosphate, &c.; E. Coal, corn, salmon, cod, haddocks, herrings, &c. LV. *Caloric*, 1,138 reg. ton. The harb. is formed by the lower or sea-reach of the river, which falls into the sea about one mile below Berwick Bridge, between a stone pier on the N. and a long low sandy spit, serving as a natural breakwater, on the S. W. of E. varies, but as a rule is about 300ft, facing ESE. Half a mile inside the pierhead on Spittal side of river is a large rock formed into a quay. Area of wet dock is $3\frac{1}{2}$ acres; depth of water OT. 18ft; HST. 21ft. 1,500ft of quayage space. Steam crane to lift 20 tons.

Charges.—Ballast dues inward, whether landed or shifted into another vessel 6d ton; outward 2d. Special dock dues for every ship or vessel entering the wet dock over and above the before-mentioned dues 2d for every ton. Tonnage dues on ships entering or leaving the harb. 1d to 11d. For every ship or vessel entering the harb. $3\frac{1}{4}$ (for harb. duty) over and above the before-mentioned rates and duties. Dues on goods, from $\frac{1}{2}$ d to 4, charged per keel of cinders or coke.

Pilotage.—District. From the sea at the mouth of the river Tweed, up the river on both shores to the mouth of the river Whittader, where it flows into the Tweed, and also from the east end of the pier, two miles in a straight line in every direction along the coast and into the sea. Rates (both inward and outward): In summer, viz., from April 1 to Oct. 1, $1\frac{1}{3}$; in winter, viz., from Oct. 1 to April 1, $1\frac{1}{6}$ ft; and for each tide's work within the harb. 7.6.

Towage.—5/ each vessel, and 2d reg. ton on all vessels of or above 40 tons.

Officials.—Clerk to Harb. Commrs. S. Sanderson; Harb. Master, G. Smith; Coll. of H.M. Cust., John W. Hay.

Hotel.—"King's Arms," John Carr.

BERWICK NORTH, Haddingtonshire, Firth of Forth. Lat. $56^{\circ} 3' N$; long. $2^{\circ} 43' W$. Ry. N.B. There is a small trade in corn and potatoes. D. HWST. 12 to 13ft; HWNT. 8 to 9ft. A lifeboat station.

Charges.— $1\frac{1}{2}$ d per ton reg. Lights 1/. Water 1/ per vessel.

Pilotage.— $1\frac{1}{3}$ per foot.

Official.—J. Marr, Harb. Master.

BIDEFORD, Devonshire. Lat. $51^{\circ} 4' N$; long. $4^{\circ} 12' 30'' W$.
Seaport on the river Torridge, 8m SE. from Barnstaple. Auth. Town Council. Ry. S.W. THW. 6h 26m; Accn. Small tidal harb. dry at LW. and 16ft to 18ft HWST. W prev. N. There is a wharf belonging to railway company 324ft long with crane power to 10 tons.

Official.—Harb. Master, H. Lee Hutchings.

BIRKENHEAD.—See Liverpool.

BLACKPOTS, Banffshire, near Cullen. Lat. $57^{\circ} 42' N$; long. $2^{\circ} 45' W$. Auth. Owner, Earl of Seafield. W. prev. N. and NE. A small tidal fishing harb. D. 5ft to 6ft; dry at LW.

Charges.—2d per ton.

BLACKROCK.—See Cork.

BLAKENEY and CLAY, Norfolk. Lat. $52^{\circ} 57' N$; long. $1^{\circ} 3' E$. 5m. NE. of Nott. Auth. Harbour Commissioners under Statute 57 George III., c. 70. THW. f. and c. 6h 30m. D. 2ft on bar at LW., 13ft HWNT., and 18ft HWST. D. in harb. 6ft HWNT., and 10ft HWST., 2ft LW.

Official.—Clerk, C. J. Temple Lynes.

Charges.— $1\frac{1}{2}$ d per ton on vessels and dues upon goods passing through the cut up to the quay.

BLYTH, Northumberland. On the SW. side of the river Blyth at its outlet. Lat. $55^{\circ} 7' N$; long. $1^{\circ} 30' W$. Pop. 10,900. Auth. Harbour Commissioners, under Act of Parliament, 45 and 46 Vict., Session 1882. THW. 3h 15m; Sp. rise 15ft; N. rise 11ft.; R. of N. 7ft. D. on bar about 10ft at LWST. W. prev. W.; most dangerous NE. Ry. N.E. Tr.—I. Timber and agricultural produce; E. chiefly coals. LV. using the harb. are about 350ft long, 40ft beam, and 23ft dft., and have a gross carrying capacity of about 500 to 4,500 tons. Accn. The total area of the harb. from the lowest quay to upper end of Cowpen-square, measuring to HW. mark, is about 64 acres. Area of Accn. in the harb. for ships and boats is about 34 acres, and the average depth over that area is about 15ft; 4 acres have a depth of 20ft, and 1 acre 29ft. No wet docks, but four dry docks, and one gridiron. Total length of quayage space in the harb., including the coaling staiths, 3,300ft. Eleven high-level coaling staiths upon the most improved principle, with railway approaches and sidings for the output of several collieries, capable of coaling into two hatchways of a vessel at one time.

Charges.—Harb. dues $1\frac{1}{2}$ d to 6d. Trimming charges. Ballast discharging at cranes 1/ ton.

Pilotage.—See Whitby.

Towage.—Towage in if under steam, from 300 tons reg. and under 1,000 tons reg. $\frac{1}{2}$ d per reg. ton; out, ditto, 300, $\frac{1}{2}$ d; in, 1,000 and above, £2 12s 6d; out, ditto, £2 12s 6d. In, if not under steam, all steamers $1\frac{1}{2}$ d. reg. ton; out ditto, $1\frac{1}{2}$ d. Docking or undocking £1. Sailing Ships—Towage in, 1/6 per keel; out, 2/6 per keel.

Officials.—Clerk to Commrs., J. Easton; Harb. Master, W. Tate; Supt. of Customs, &c., J. McKittrick.

BODDAM, Aberdeenshire. N. of Buchan Ness. Lat. $57^{\circ} 28' N$; long. $1^{\circ} 18' W$. Auth. Owner, W. Aiton, of Boddam, by Act 8 and 9 Vict., c. 25, and a Provisional Order of 1878. THW. f. and c. 0h 44m. W. The most

dangerous is the E. Harb. has an area of 9,600 sq yds. D. is about 9ft HWN., and 11ft at HWST. The port is used by fishing boats, of which 76 large and 42 small vessels belong to the port, steamers, and coasting vessels up to 150 tons reg. A crane and weigh-bridge. The Harbour of Refuge works are in close proximity.

Charges.—For all vessels loading or unloading 4d per ton reg. ; for all vessels, windbound, or sheltering 2d per ton reg.

Official.—Harb. Master, W. Mackie.

Hotels.—"Seaview," and "Buchanness."

BOGNOR, Sussex. Lat. $50^{\circ} 47' N$; long. $0^{\circ} 40' W$. THW. f. and c. 11h 48 m. There is no harb. authority.

Hotel.—"Victoria," G. H. Owens.

BONAR BRIDGE, Port of Inverness, Tain Forth. D. 10ft HWS. and 6ft HWNT.

Official.—G. Henderson, Merchant.

BO'NESS, Linlithgow. On the Firth of Forth, about 17m. above Leith. Lat. $56^{\circ} 2' N$; long. $3^{\circ} 36' W$. Pop. 6,000. Auth. Harbour Commissioners. P. NC. D. on bar 4ft at LWOST. W. The port is not exposed to gales such as endanger vessels entering or leaving the harb. Ry. N.B. Tr.—I. Timber, esparto grass, iron ore, grain, wood pulp, sulphur, ore phosphates and chemical manures ; E. Coals, pig-iron, and fire-bricks. LV. entered at any time of tide was the *Dolcoath* of Cardiff, 2,000 reg. ton., carrying 2,000 tons, and drawing 19ft of water ; steamers of from 700 to 800 reg. ton., and carrying 2,400 tons of cargo, drawing 17 to 19ft of water, use the works daily. The total area of the harb. is 30 acres. The total extent of quayage is 1,900ft. The depth in the harb. varies, in consequence of a considerable deposit of silt, but by dredging the depth in the fairway is maintained. The above area includes a wet dock of $7\frac{1}{2}$ acres and 2,400ft of quayage. Depth of water on the sill of dock is 22ft at H.W. of OST. Entrance to dock 50ft wide by 120ft long. There are portable cranes, storage sheds, hydraulic machinery, &c. THW. f. and c. 2h 10m.

Charges.—Harb. dues, coastwise 2d reg. ton. Foreign 3d reg. ton. Rates on goods 1d to 4d.

Pilotage.—Local. According to tonnage, inward and outward, from 8/6 for vessels under 100 tons reg. to 35/ for vessels of 1,000 tons and upwards, vessels light or in ballast $\frac{1}{3}$ rd less. Rates. Coastwise 1/ ; foreign 1/6 ft.

Towage.—As per agreement.

Officials.—Clerk to Commrs., R. J. Jamieson, S.S.C. ; Harb. Master, Angus McIntosh ; Dep. Harb. Master, H. Phillips ; Coll. of H.M. Cust., W. Eddy.

Hotels.—"Clydesdale" and "Douglas."

BOSCASTLE, Cornwall. Lat. $50^{\circ} 30' N$; long. $4^{\circ} 48' W$. Bristol Channel. Auth. Owner, Henry Pigé Leschallas. THW f. and c. 4h 58m. W. prev. NW. and W. A small port used by vessels of 200 to 300 tons.

Officials.—Agents, Merriman, Pike & Merriman, 25, Austin Friars, London ; Harb. Master, James Rickards.

Pilotage.—In or out 2/ for every 10 tons, and 2/ for warping in or out.

BOSHAM, Sussex. Lat. $50^{\circ} 50' N$; long. $0^{\circ} 52' W$. THW. f. and c. 11h 48m. There is no harb. authority. A small patent slipway.

BOSTON, Lincolnshire. On the Witham, near the sea. Lat. $52^{\circ} 57' N$; long. $0^{\circ} 3' W$. Pop. 18,870. Auth. Corporation acting as Harbour Commissioners under Charter of Queen Elizabeth and Acts of Parliament. P. C. THW. 6h 30m ; Sp. rise 22ft. D. on bar at lower end of Boston Deep is 15ft, and in roadstead 26ft at LW. of ST. W. Roadstead (Clayhole) well sheltered and has good anchorage. Ry. G.N. Tr.—I. Timber, pit-props, hemp, tar, iron, linseed, cotton seed, cake, grain, sugar and general goods ; E. Corn, coal, machinery, agricultural implements, and produce. LV. The LV. can now proceed up the river to the dock and discharge cargoes, and in many cases exceed 1,600 tons net reg. ; the LV. which has entered at any time of the tide is 21½ft dft. and the largest at lowest, 15ft dft. Accn. Dock area 6½ acres, depth of water on sill 25ft HWST., length of quayage space 2,330ft. ; large fish landing stage and bonded warehouses for tobacco, wine, and spirits. The dock is provided with hydraulic cranes and a coal-hoist capable of discharging from either drop-bottom or side-delivery waggons 100 tons an hour. Sheds are on the quays for the storage of grain, and there is a grain warehouse, provided with elevating and weighing machinery, capable of holding 20,000 quarters of grain. Another grain warehouse is being constructed capable of holding 24,000 quarters. There is a gridiron for vessels up to 300 tons reg. Thompson's Patent Slipway is 200ft long, 32ft wide. H. of T., ST. 22ft ; N. 15ft 4in. Crane power to 15 tons. In addition to dock accommodation, there is sufficient quay space for a number of vessels.

Charges.—Harb. tonnage rates 6d ton. For vessels using the dock or any of the quays or wharves thereof, a duty of 3d reg. ton. is charged in addition to dock dues. Rates or duties ½d quarter for all kinds of grain. Wharfage dues in addition to harb. and dock dues. Dock rates payable on vessels entering the dock 3d to 1/.

Pilotage.—District. To river Witham from the Grand Sluice in Boston, the Scalp, and also the Roads, and all the Norman Deep, and also all places, watercourses, and streams of the washes in the parts of Holland extending to Wainfleet Haven, Pullye Heads, the Knock, the Dog's Head in the Pot, and to the uttermost limits of the flowing and ebbing of the above waters in the county of Norfolk.

Rates. From High Horn or Boston Toft, to Boston Town or *vice versa*, or any intermediate distance, under 10½ft, 1/6 ; 10½ to 12ft, 1/9 ; 12 to 14ft, 2/ ; 14 to 16ft, 2/6 ; over 16ft, 3/.

Towage.—Boston to Roadstead and *vice versa*—Sailing vessels from all Southern Ports, 6d per ton reg. Steamers, 2d. Sailing vessels from Baltic and Northern Ports, 4½d per reg. ton. Steamers 1d. Light vessels 3d per reg. ton. Vessels attended to more than one tide between Elbow Buoy and Boston 10/ per tide extra. NOTE.—Passenger rates and towing beyond the limits of Elbow Buoy by arrangement.

Officials.—Clerk to Harb. and Dock Commrs., B. B. Dyer ; Dock Man., C. W. B. Anderson ; Harb. and Dock Master, T. Shephard ; Surv. and Dock Engineer, W. H. Wheeler, M.I.C.E. ; Supt. of Buoys, S. Hackford ; Clerk to Pilot Commissioners, C. Lucas ;

Ship Broker, Lloyd's Agent, and Danish Vice-Consul, A. H. Reed; Norwegian, Swedish, and German Vice-Consul, J. E. Ridlington; Coll. of H.M. Customs, Ellis Hughes.

Hotels.—"White Hart," J. Challan and Son; "Peacock and Royal," R. H. Clemow; and "Red Lion," Mrs. Dolton.

BOWLING, River Clyde, Scotland. **Auth.** (1) The Caledonian Ry. Co., who own E. portion of harb., at entrance to Forth and Clyde Canal; quay space of 750ft; two portable steam cranes; timber wharf 460ft in length. Sea-going vessels not exceeding 68½ft × 19½ft and drawing 8ft 6in can pass through the canal to Port Dundas, Glasgow, and all the ports on the East Coast. (2) The Clyde authorities own the W. portion of the harb., and use it for laying up vessels. (3) The N.B. Ry. own Friskey Wharf.

Officials.—Harb. Master, James Beaton; Coll. of Harb. and Canal dues, James Dewar; Principal Customs Officer, J. W. Wilson.

BOWMORE or KILLARROW, Argyllshire, Isle of Islay. Lat. 55° 48' N; long. 6° 18'

W. **Auth.** Owner, C. Morrison, Islay. **THW.** f. and c. 5h 28m. Small harb. dry at LW. used by coasters up to 50 tons. Vessels discharge into boats. Good anchorage in about five fathoms.

Charges.—Dues 1½d per ton.

Official.—J. S. R. Ballingal, factor, Eallabus, Islay.

BRADING, Isle of Wight. Lat. 50° 44' N; long. 1° 8' W **THW.** 11h 4m. **Auth.** F. H. Coldwells, of Bembridge, I. of W., receiver for the High Court of Chancery. A yachting station. There is also a small trade in coal, &c., with the N. of England.

BRADWELL-ON-SEA, Essex. A sub-port of Colchester. **THW.** at f. and c. 12h 0m. **D.** HWST. 13ft; HWNT. 9ft; LWST. 3ft.

Accn.—Three wharves. Trade, hay and straw.

Charges.—1½d per ton reg. on vessels and 4½d per ton on coke and coals.

Official.—Harb. Master, C. W. Parker.

BRANCASTER, Norfolk. Lat. 52° 57' 30" N; long. 0° 47' E. **Auth.** Owner, Elijah Sutherland. **THW.** f. and c. 6h 17m. W. prev. NE., N. and NW. A small harb. 2 miles from Burnham, dry at LW.

Charges.—2d per ton and 5/ per vessel for buoyage and beaconage.

BRANDON, Co. Kerry, Ireland. Lat. 52° 15' N; long. 10° 15' W. **Auth.** Grand Jury of Co. Kerry. **THW.** f. and c. 4h 23m. A small useful pier with storm wall in Brandon Bay, between Brandon Head and Tralee Bay.

Official.—E. A. Hackett, Co. Surveyor, Tralee.

BRAUNTON, Devonshire. Lat. 51° 12' N; long. 4° 12' 30" W. **Auth.** Owner, Sir W. R. Williams, Bart. **THW.** f. and c. 6h 43m. Used by colliers of 60 to 90 tons. **D.** 3ft LW. and 10ft HW.

Charges.—1/ keelage and 4d mooring.

Officials.—Agent, T. J. Pitts Tucker, Bridge Chambers, Barnstaple; Harb. Master, T. Clarke.

Hotels.—At Barnstaple and Braunton.

BRAY, Co. Wicklow, Ireland. Lat. $53^{\circ} 12' N$; long. $6^{\circ} 10' W$. 12 miles SE. of Dublin. **THW.** f. and c. 11h 28m. A small harbour into which small colliers enter at HW. over the bar of the Dargle. No Harb. Auth.

BREAN DOWN, Somersetshire—British Channel. 4 miles W. of Weston-super-Mare. An Act has been obtained for building a harbour at this place, to be connected by a short line to the G.W.R. System. The works when completed will give accommodation for the largest vessels afloat. **D.** at LWST. 30ft.

BRIDGENESS, Linlithgow, Scotland. Lat $56^{\circ} 2' N$; long. $3^{\circ} 36' W$. Auth. Owner, H. M. Cadell, Grange, Bo'ness. **THW.** f. and c. 3h 3m. **Accn.** A tidal harb. chiefly used by vessels exporting coal from adjoining collieries—small import trade in pitwood, clay, &c. **D.** Sp. 15 to 18ft; N. 10 to 12ft.

Pilotage.—As per agreement. **Ballast.**—Taken from the ship's side, free.

Charges.—Harb. dues, vessels loading coals and minerals, &c., 1d per ton on the quantity shipped. Vessels discharging wood, lime, &c., &c., $1\frac{1}{2}$ d per reg. ton. Vessels beaching within the harb. to clean or repair, $1\frac{1}{2}$ d per reg. ton. Vessels beaching within the harb., if they remain beyond 4 days, $\frac{1}{2}$ d per ton additional. Stowage of coals, vessels under 100 tons, 1d per ton shipped; vessels above 100 tons, $1\frac{1}{2}$ d per ton shipped.

Officials.—Clerk, D. Tweedie; Harb. Master, J. Stupart.

Hotels.—"Bo'ness," "Clydesdale" and "Douglas."

BRIDGWATER, Somerset. An inland port on the river Parret. Lat. $51^{\circ} 7' N$; long. $3^{\circ} W$. **Pop.** 12,000. **Auth.** The Corporation. **P. C.** **THW.** on bar f. and c. 6h 50m; Sp. rise 18ft. **D.** on bar 1ft at LW. **W.** prev. WNW. **Ry.** G.W. **Tr.**—I. Wines, hemp, tallow, timber, coals, &c.; E. Chiefly agricultural produce. **LV.** entered the dock 340 reg. ton. **Accn.** No harbour nor pier. Bridgwater Dock is 700ft by 200ft; basin, 150ft by 100ft; quayage, about 1,100ft on the Parret; 12ft deep on sill OHW. **H.** of T., ST. 16ft; NT. 4ft (owned by G.W. Ry. Co.).

Charges.—Harb. dues 1d reg. ton., with 1/ for moorage. Dock dues 3 classes vary from 1d to 8d ton.

Pilotage.—District. Parts of the Bristol Channel and adjacent rivers and creeks, on the south-east side of, and within an imaginary straight line drawn from Anchor Head, on the east to Watchet. **Rates.** From the extreme limits of the navigation, or from any point between such limits and the outer buoy of the Gore Sand, to the town or to any point between the Black Rock and the town; also from the town to the limits of the navigation, or to any point between the outer buoy of the Gore Sand and the above limits:—Not ex. 60 tons reg. 12/ vessel; ex. 60 and not ex. 80 tons $1\frac{1}{3}$ per foot; ex. 80 and not ex. 100 tons 2/; ex. 100 and not ex. 125 tons 3/; ex. 125 and not ex. 150 tons 4/; ex. 150 and not ex. 200 tons 5'; ex. 200 and not ex. 250 tons 6/6; ex. 250 tons 8/ foot dft.

Towage.—**Vessels drawing**

One tide's work, to or from—	Un. 10ft.	Un. 11ft.	Un. 12ft.	Ov. 12ft.
	Pr. Ton.	Pr. Ton.	Pr. Ton.	Pr. Ton.
Burnham, Blackrock, or any intermediate place, to or from Bridgwater	3d	4d	5d	6d
Burnham to Blackrock, Dunball, or Cumbwitch.....	1½d	2d	3d	3d
Burnham and Highbridge.....	2d	3d	4d	5d

Vessels can only be towed to Highbridge or Dunball when the trade to Bridgwater permits.

Officials.—Town Clerk, Paul O. H. Reed, Jun. ; Harb. Master, J. Job-on ; Dock Master, J. Staples ; Graving Dock Man., F. Carver ; Coll. of Harb. Dues Cust., C. Ord.

BRIDLINGTON, or Burlington, Yorkshire. Lat. 54° 7' N ; long. 0° 8' W. Near Flamborough Head. Ry. N.E. THW. f. and c. 4h 39m. Auth. Pier and Harb. Commrs., by Act 1 Vict., c. 110. Harb. dries at LWST. D. at HWST. 13ft. Ordinary dft of vessels about 9ft. Crane power 3 tons.

Charges.—In ballast 2d per ton, laden 3d ; if discharged cargo 6d per ton.

Officials.—Clerk, T. Heselton ; Harb. Master, John Gray.

BRIDPORT, Dorsetshire. Lat. 50° 41' N ; long. 2° 51' W. Situated on the Bride River. Auth. Commrs. under Statute 4 Geo. IV. THW. f. and c. 6h 16m. D. 4ft on bar LWNT. when channel is clear of gravel, and 12½ft at berths at HWST. Entrance 40ft wide. Ships of 300 tons enter at HW. Tr. Cordage, sailcloth, nets, and twines. Used by vessels from Russia, Norway, &c. Width between piers 51ft.

Charges.—2d per ton reg.

Officials.—Clerk, C. G. Nantes ; Harb. Master, M. J. Briggs.

Hotels.—" West Bay," " George," and " Bridport Arms."

BRIGHTLINGSEA, Essex. Entrance to River Colne. Lat. 51° 47' N ; long. 1° 2' E. Auth. Corporation of Colchester under an ancient Royal Grant. THW. f. and c. 11h 56m. W. prevailing SSW. and N. The River Colne is accessible at all times in the channel. The Bar which is parallel to the channel dries LW., D. in channel being 3 to 4 fms. Used by about 200 fishing vessels, and occasionally by larger ships bringing coal and wood from foreign ports for Colchester. LV. One of H.M. ships of 1,200 tons. There are 2 patent slipways at this place capable of taking vessels of 200 to 300 tons.

Charges.—1/ for each vessel anchoring in the River Colne.

Officials.—Town Clerk, H. C. Wanklyn, Colchester ; Harb. Master, Joseph Ames.

Hotels.—"Swan" and "Royal."

BRISTOL, a county, city, and seaport, on the river Avon, about 6½ miles above its junction with the river Severn Lat. 51° 27' N ; long. 2° 38' W. Pop. 225,000. Auth. Dock Committee of the Corporation of Bristol. P. C. THW. a follows :—

	City Docks. (Cumberland Basin Gate.)	Avonmouth Dock.	Portishead Dock
HW.	7h 13m	7h 13m	7h 13m
Sp. rise	33ft	38ft	34ft
N. rise	23	28ft	24ft

D. on bar ; though there is no regular bar at the entrance of the river Avon, there is at dead LWST. only 3½ft of water at the river mouth. There is a range of tide however of 36ft at ST. and 21ft at NT. W. prev. as follow :—City Docks : these docks, being 7 miles inland up the river Avon, may be considered as landlocked, and not liable to damage by prev. winds. Avonmouth and Portishead Docks : the prev. winds are W., but they are not dangerous to shipping, either in or entering the dock. Rys. G.W., M., Bristol Port and Pier. Tr.—I. From United States and West Indies, grain from East Indies, Colonies, Black Sea, and America, oils, marbles, ores, seeds, fruit (green and dry), provisions, hides, tallow, timber, deals, and petroleum ; E. Salt, tin-plates, railway material and machinery, manufactured oils, cotton, piece goods, spar and general goods. LV. as follow :—City Docks : *Bertha* 1,433 tons, *Dundee* 2,012 tons, *Frederico* 1,459 tons, *Warwick* 1,648 tons, *Frankholme* 1,714 tons, *J. B. Thomas* 1,851 tons. Avonmouth Docks : the steamers of the "Dominion," "Anchor," and other Lines, with a carrying capacity of from 2,000 to 4,000 tons, and drawing up to 25ft have regularly used the dock, and in no case has a vessel been detained a tide for want of water. The port and harb. of Bristol extend from Hanham Mills on the river Avon down to the mouth of that river, and thence down the river Severn and the Bristol Channel from Kingroad W., to the Steep Holmes and the Flat Holmes. The dock system comprises the *Bristol Docks* within the city ; the *Avonmouth Docks* at the junction of the rivers Avon and Severn on the Gloucester side ; and the *Portishead Dock* on the Bristol Channel, on the Somerset side. The chief entrance to the *City Docks* is through a lock 350ft long by 62ft wide. The total area of the docks is 85 acres with a wharfage space of 7,500 yds ; the depth of water in the dock being 33ft mean ST., and 23ft mean NT. There are two entrances to these docks, the principal being at Cumberland Basin. The floating harb. connected with this tidal basin extends three miles through the centre of the city. Alongside the docks are public quays, granary capable of storing 80,000 qrs. filled with elevating machinery, transit and other sheds and many private wharves, factories and timber yards, with varying depths of water. There is extensive Accn. for foreign cattle, viz. :—Scheduled 800,

unscheduled 600, total for 1,050 cattle, also refrigerating chambers for 300 carcasses. There are the following dry docks, &c. :—

Ample cranes and every accommodation. The Avonmouth Dock is 1,400ft long and 500ft wide, with a depth of water on sills of 38ft at mean ST., and 28ft at mean NT. Area 16 acres. Length of wharfage 1,200yds, entered from the Avon by a lock 454ft long and 70ft wide. Vessels of almost any size can enter this dock on any tide, day or night, throughout the year. Vessels of 30ft dft., and of any tonnage can proceed from sea up to Kingroad anchorage within one mile from dock gates at any time of the day or tide. For despatch in discharging grain and general cargo at low rates this dock claims to have no equal in Great Britain. Warehouse Accn. The sheds have a floor space of about 13 acres; a large granary capable of stowing 40,000 quarters of grain. Accommodation for 1,300 animals. The Portishead Dock is 1,800ft long, fitted with elevators, &c., 300ft wide, and has an area of 12 acres. Depth of water on sill 34ft at mean ST., and 24ft at mean NT. Length of wharfage 600yds. It is entered from Kingroad by a lock 444ft long and 66ft wide. The dock is well situated under the shelter of the Portishead Hills, and is easily accessible from Kingroad, where there is an excellent anchorage at any time of the tide. Vessels can enter or leave in any weather, and steamers enter direct from the deep fairway of the Channel without the assistance of tugs. Extensive shed accn. alongside quay; storage capacity for grain about 180,000 quarters. Splendid granaries fitted with elevators.

Charges.—Dues on shipping entering the port vary from 1½d to 1/1½ at the Bristol Docks, and 1½d to 1/4 at Avonmouth and Portishead Docks. Rates on goods imported. Labour charges and rent on goods imported. Stevedoring and all labourage on cargo undertaken by the Docks Committee at charges varying according to the nature of the cargo. For every sea-going vessel which shall remain in the Docks for any period exceeding one lunar month after entering the same, 1d. per reg. ton per week to the expiration of the second lunar month, and 2d per reg. ton per week at Bristol and Avonmouth Docks, and 1d per reg. ton per week at Portishead Dock, for every week after the expiration of such second month, until further notice.

Pilotage.—District. Defined by the Wharfage Act of 1st August, 1807, 47 Geo. III. c. 33, to be to the East of Lundy Island;

and in the case of "Hall v. Cardiff Pilotage Board," November 18, 1879, that is defined to be "Eastward of a Meridional Line from North to South through Lundy," which line is $4^{\circ} 40'$ W. long.
Rates:—

		Between Lundy and Coombe.			Between Lundy and Swansea or Minehead.			Between Lundy and Bridgwater, Cardiff, or the Holmes.			Between Lundy and Newport or Kingroad.			Between Coombe and Minehead.			Between Coombe and Bridgwater, Cardiff, or the Holmes.		
Tons.	Tons.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
If 80 and under 100	100	1	1	0	2	2	0	2	12	6	3	3	0	1	1	0	1	11	6
100	200	1	8	0	2	16	0	3	10	0	4	4	0	1	8	0	2	2	0
200	300	1	15	0	3	10	0	4	7	6	5	5	0	1	15	0	2	12	6
300	500	2	2	0	4	4	0	5	5	0	6	0	0	2	2	0	3	3	0
500	600	2	9	0	4	18	0	6	2	6	7	7	0	2	0	0	3	13	6
600	800	2	16	0	5	12	0	7	0	0	8	8	0	2	16	0	4	4	0
800	1,000	3	3	0	6	6	0	7	17	6	9	9	0	3	3	0	4	14	6
1,000 and upwards		3	10	0	7	0	0	8	15	0	10	10	0	3	10	0	5	5	0

		Between Coombe and Newport or Kingroad.			Between Minehead and Bridgwater, Cardiff, or the Holmes.			Between Minehead and											
Tons.	Tons.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
If 80 and under 100	100	2	2	0	0	10	6	1	1	0	0	10	0	0	10	0	0	10	6
100	200	2	16	0	0	14	0	1	8	0	0	15	0	0	14	0	0	14	0
200	300	3	10	0	0	17	6	1	15	0	1	0	0	0	17	6	0	17	6
300	500	4	4	0	1	1	0	2	2	0	1	5	0	1	1	0	1	1	0
500	600	4	18	0	1	4	6	2	0	0	1	10	0	1	4	6	1	4	6
600	800	5	12	0	1	8	0	2	16	0	1	15	0	1	8	0	1	8	0
800	1,000	6	6	0	1	11	6	3	3	0	2	0	0	1	11	6	1	11	6
1,000 and upwards		7	0	0	1	15	0	3	10	0	2	5	0	1	15	0	1	15	0

Towage.—Sailing Vessel, per ton reg.:—Holmes to Avonmouth Docks, 5d.; to Portishead Docks, 5d.; to Bristol Docks, 7d. Kingroad to Avonmouth Docks, 3d.; to Portishead Docks, 3d.; to Bristol Docks, 5d. Avonmouth to Kingroad or Portishead, 3d.; to Cardiff, 6d.; to Newport, 6d.; to Penarth, 6d.; to Holmes, 5d. Portishead to Kingroad, 3d.; to Cardiff, 6d.; to Newport, 6d.; to Penarth, 6d.; to Holmes, 5d. Bristol to Avonmouth, 4d.; to Portishead, 4d.; to Kingroad, 4d.; to Newport, 8d.; to Penarth, 6d.; to Cardiff, 8d.; to Holmes, 6d.

Sailing vessels over 700 tons and not exceeding 1,300 tons, to and from Bristol and Kingroad, are entitled to a second tug without extra charge, and if over 1,300 tons, to a third tug without extra charge. Sailing vessels over 800 tons register, to and from Avonmouth or Portishead Docks, are entitled to a second tug without extra charge.

Steamers: Kingroad to Avonmouth or Portishead when required, by agreement. Kingroad to Bristol when required, 4d per ton; charge for one tug not to exceed £14 Bristol to Kingroad when

required, 3d. per ton ; charge for one tug not to exceed £10. For each additional tug required, up or down the river, £5.

N.B.—These rates are now under consideration, with the view of a lower tariff being established at an early date.

Officials.—Sec. and Gen. Man., F. B. Girdlestone ; Engineer, J. W. Girdlestone ; Haven Master of the Port, Capt. E. T. Parsons, R.N. City Docks : Water Bailiff and Quay Warden, Capt. S. Baker ; Deputy do., Capt. J. Turner ; Traffic Man. and Supt. of Warehouses, J. Macnab ; Dock Master (Cumberland Basin), Capt. J. Tomlinson ; Deputy do., Capt. W. Cook ; Dock Master (Bathurst Basin), G. Dando. Avonmouth Docks : Traffic Man., J. Robson ; Dock Master, Capt. C. Hodder ; Lloyd's Agent, Capt. Tozer, I.N. Portishead Dock : Traffic Man., T. Butler ; Dock Master, E. W. Harvey ; Coll. of H.M. Cust., F. W. Bisshop ; Lloyd's Agent, F. Barnard.

Hotels.—"Grand," "Royal College Green," T. J. Chapman ; "Clifton Down," H. F. Barton ; "Grosvenor," Misses Stockham and Vallender ; "Colston," The Manageress ; and "St. Vincent Rocks," The Manageress.

BRITON FERRY.—See Neath.

BRIXHAM, Devonshire. Lat. $50^{\circ} 24' N$; long. $3^{\circ} 30' W$. On W. side of Torbay. Ry. Gt. Western. Auth. Commrs. under Statute 1 Vict., c. 75, and Brixham Harb. Orders 1875 and 1877. THW. f. and c. 6h 14m. There are no docks, but a breakwater is in course of construction. When completed the harb. will have area of 145 acres, with D. from 6 to 24ft.

Official.—Clerk, W. P. Spark.

BROADSTAIRS, Kent. Lat. $51^{\circ} 21' N$; long. $1^{\circ} 22' W$. Isle of Thanet. Auth. Pier and Harb. Commrs., acting under Statutes 31 and 45 Geo. III c. 86 and 102. THW. f. and c. 11h 38m. W. prev. N. Area of harb. about $1\frac{1}{2}$ acres. No vessels can enter at LW., but ships of 120 tons enter HW. D. HWST. 7ft.

Charge.— $1/6$ per ton on coal.

Pilotage.—According to agreement

Officials.—Clerk, R. S. Dawson ; Harb. Mast., S. Holbourn.

Hotels.—"Grand," "Albion," and "Balmoral."

Coal Depot.—R. S. Dawson & Co.

BRORA, Sutherlandshire. Lat. $58^{\circ} 0' N$; long. $4^{\circ} 7' W$. N. of Dornock Firth. Auth. Owner, the Duke of Sutherland. THW. f. and c. 11h 38m. Used by about 70 coasters of up to about 70 tons. There are no dues.

Official.—Factor, D. McLean, Esq., Goldspie.

BROUGHTY FERRY.—See Dundee. Pier with 10ft D. at end LW. A lifeboat station. Ry. N.B.

BRUCEHAVEN, Linlithgow. Sub-port of Grangemouth. D. HWST. 10ft ; HWNT. 6ft.

BRUCKLESS, Donegal, Ireland. A small harbour belonging to the Grand Jury of Co. Donegal.

Official.—F. Gahan, Esq., C.E., County Surveyor, Donegal.

BRYERS.—See Scilly.

BUCKHAVEN, Fifeshire. Lat. $56^{\circ} 10' N$; long. $3^{\circ} 1' 44'' W$. 5 miles from Dysart. No harb. auth. THW. f. and c. 2h 33m.

Appliances for shipment of coal—four hydraulic hoists, ballast cranes, and a 2-ton lifting crane.

Charges.—Harb. rates from 1d to 4d per ton. Light dues $\frac{1}{4}$ d per ton. Ballast 1/ per ton in dock, 9d in tidal harbour. Rates on vessels using dock: Coastwise 4d, foreign $4\frac{1}{2}$ d to 6d per ton reg.; Steamers—coastwise $5\frac{1}{2}$ d, foreign 6d per ton reg.

Pilotage.—Rates (inwards and outwards):—

	£	s.	d.		£	s.	d.
Vessels under 100 tons reg. . .	0	6	6	Vessels 400 and under 500 tons	0	17	6
„ 100 and under 150 tons	0	8	0	„ 500 „ „ 600 „	0	18	0
„ 150 „ „ 200 „	0	9	6	„ 600 „ „ 700 „	1	0	6
„ 200 „ „ 250 „	0	11	0	„ 700 „ „ 800 „	1	2	0
„ 250 „ „ 300 „	0	12	6	„ 800 „ „ 900 „	1	5	0
„ 300 „ „ 350 „	0	14	0	„ 900 „ „ 1,000 „	1	7	6
„ 350 „ „ 400 „	0	15	6	„ 1,000 tons and upwards	1	10	0

Towage.—Inwards or outwards 2d per reg ton, or by agreement. From Leith to Burntisland, 60 tons and under £1 15s, and 5s for every additional 20 tons.

Officials.—Harb. Master, W. Galloway; Town Clerk and Clerk to Commrs., T. A. Wallace; Coll. of H.M. Cust., G. Davidson; Harb. Dues Coll., J. Isles; Lloyd's Agent, Capt. W. Galloway; Stevedore, Peter Robb.

Hotel.—“Forth.”

BURRY PORT, Carmarthenshire. Lat. $51^{\circ} 40' N$; long. $4^{\circ} 15' W$. Auth. Burry Port & Gwendreath Valley Ry., under Acts of Parliament. THW. f. and c. 6h 8m. Accn. Tidal harb. 15 acres in area. En. 220ft wide. D. on sill 22ft HWST., and 15ft at HWNT. Dock 400ft by 160ft, with entrance 45ft wide, and quayage of about 250ft. There are ballast cranes delivering 30 tons per hour, and staiths for coals lifting 400 tons per hour. Cranes up to 5 tons. A life-boat station.

Floating Docks accommodating vessels up to 3,000 tons; gates 45ft; D. on sill 22ft at HWST. and 15ft at HWNT.

Charges.—Vessels seeking shelter or freight in outer harb. free; in inner harb. 2d per ton. Vessels discharging and loading 3d per ton, or discharging or loading only 2d per ton.

Towage.—From port to sea, or from sea to port:

Under 150 tons register	4d per ton.
150 and under 200 „	$4\frac{1}{2}$ d „
200 „ 250 „	5d „
250 „ 300 „	$5\frac{1}{2}$ d „
300 tons and upwards	6d „

Officials.—Dep. Harb. Master, John Mitchell; Coll. of Harb. Dues, Edward Evans.

Hotels.—“Neptune,” “Gwendraeth,” “Cambrian,” “Harbour View,” &c.

BURTONPORT, Co. Donegal, Ireland. Lat. $55^{\circ} N$; long. $8^{\circ} 45' W$. Auth. Grand Jury, Co. Donegal. Accn. Area 12,000 sq yds. D. Dry at LWOST., 15ft at HWOST. Used by vessels of up to 250 tons. W. prev. and most dangerous, W. and SW. THW. f. and c. 5h 56m.

Official.—Denis Boner, Harbour Constable.

CAHIRCIVEEN, Co. Kerry. Lat. $51^{\circ} 58' N$; long. $10^{\circ} 20' W$. 3 miles from Valentia. Auth. The Grand Jury of Co. Kerry. Accn. A good pier protected from the W. by a mole. Has a berth for a steamer of about 200 tons. D. 6ft LW., and 20ft on bar at HW. THW. f. and c. 4h 2m.

CAISTOR. A fishing station near Yarmouth. No harb. works.

CALEDONIAN CANAL. Connecting the North and Irish Seas, from the Firth of Moray to Loch Eil. Length 60½ miles, of which 37½ are composed of locks, and the remainder of canal. Opened in 1822. Dimensions of locks, 160ft by 38ft and 15ft deep. Further information obtainable by application to the Superintendent of the Caledonian Canal, Inverness. High water at full and change at Corran Ferry, western end of canal, 5.15. High water at Kessock, eastern end of canal, 12.14.

Officials.—Res.-Engineer, John G. Davidson; Collector at Clachnaharry, W. T. M. Burrell; Collector at Corpach, Evan Cameron.

CALSTOCK, Cornwall. Port of Plymouth. D. HWST. 15ft. HWNT. 8ft.

Official.—Customs Agent, T. Greenfell.

CAMBUS, Clackmannan, Scotland. Lat. 56° 6' N; long. 4° 0' W. Firth of Forth. Auth. Proprietor, Lord Abercrombie; Agents, T. & B. Ranken, 17, St. Andrew's Square, Edinburgh. Accn. D dry at L.W., 8ft IIWNT., and 13ft HWST. Used by grain vessels up to 100 tons. THW. f. and c. 3h 33m.

CAMPBELTOWN, Argyllshire. Basin of the Clyde. Lat. 55° 25' 30" N; long. 5° 35' 30" W. Pop. 7,700. Auth. Town Council, under Statute, 1876. P. NC. THW. 11h 45m; Sp. rise 8½ft; N. rise 6ft. D. from 8 to 10 fathoms; there is a rise of 8ft in ST; in harb. ST. 14ft at end of quay, inside quay 8ft. W. prev. E and S. Tr.—I. Barley; coaling coals; E. draft and coals. LV. 871 reg. ton. Accn. Campbelton Loch, which is almost entirely landlocked, forms a natural harb. for the port. There are no harb. works, with the exception of three piers or quays, named respectively the Old, New, and Dalintober Quay. This loch constitutes the harbour; it has an area of about 13 square miles, and a depth of from 8 to 12 fathoms, and has about 500yds of quayage. Vessels of 11ft dft. can come up to the quay at L.W., and as there is a rise of tide from 8ft to 10ft, vessels of 19 or 20ft dft. may be berthed at the end of the quay. Crane power, 3 tons.

Charges.—Rates on vessels entering or using the harb. 3d to 6d reg. ton. Fishing boats under 15 tons 2/6 per annum. Coal dues 3d ton. Rates on goods shipped or unshipped at the harb. as per schedule. Plankage 1' to 3/.

Pilotage.—District not defined. Rates as per agreement, but varies generally between 20/ and 30/ vessel.

Towage—As per agreement.

Officials.—Town Clerk, D. Mactaggart; Harb. Master, vacant; Coll. of H.M. Cust., J. Barnes.

Hotels.—"Argyll Arms," "White Hart," "Steamboat," and "Lloyd's."

CAPE CLEAR, Co. Cork, Bantry Bay.

Official.—Patrick Cotter, Harb. Constable.

CARDIFF, seaport, S. Wales. Lat. 51° 27' 48" N; long. 3° 9' 42" W. Pop. 130,000. Auth. The Bute Docks Co. P. NC. Tr.—I. Provisions, grain, timber, esparto, iron ore, and all kinds of general produce; E. Coal is the chief export; large quantities of iron, steel, patent fuel, and general merchandise. W. prev. W., SW., SSE. to NE. Most dangerous

in Penarth Roads is from Eastward and Southerly; but the dock entrances are sheltered from all winds. **LV.** The Bute Docks are capable of accommodating the largest vessels afloat. Vessels of 6,500 tons burden and upwards trade to these docks. **Tides.**—**HW.** f. and c. at 6h 56m local, or 7h 8m Greenwich; equin. Sp. rise 42ft; ordinary Sp. 37½ft; N. 29ft. R. of N. 20½ft. The Bute Docks are approached principally by a channel Northward of the one fathom bank. All the approaches are well marked by lights and buoys. **Dock Accn.** (about 111 acres). **Entrance Channel.**—Two graving docks about 400ft long, W. of E. 45ft; **DHW.** **OST.** 25ft; **NT.** 15ft. Another floating graving dock is now in course of construction. **Gridiron** 350ft long; **DHW.** **OST.** 23ft; **NT.** 13ft. Hydraulic cranes are used for discharging ballast. Sheer legs to lift 60 tons. Hydraulic cranes (50 in number) to lift from 2 to 20 tons. Two hand cranes to lift 2 and 4 tons. Graving dock 400ft long, 48ft W. of E., 17ft deep; graving dock 420ft long, 50ft W. of E., 20ft deep; graving dock 408ft long, 48ft W. of E., 17ft deep. **Roath Basin**—(area 12 acres) entrance 80ft wide, 1,000ft long, 550ft wide in centre, quayside 2,700ft long. **DW.** on sill **OST.** 35ft 9in; **NT.** 25ft 9in. Ten staiths for the shipment of coal, with the latest improvements in hydraulic machinery. Two hydraulic cranes to lift 2 tons. Two graving docks 600ft long, each entrance 60ft wide. Vessels can be docked at any time irrespective of tides. **Roath Dock.**—Inner lock, 600ft long, 80ft wide; dock (area 33 acres) 2,400ft long, 600ft wide; quayside 5,000ft; **DW.** on sill of sea lock **OST.** 35ft 9in; **NT.** 25ft 9in. This dock is now fitted with the latest improvements for the rapid and careful handling of coals. Steamers can be loaded into two or more hatchways simultaneously at the rate of 600 tons per hour with the minimum of breakage. Hydraulic appliances for the rapid handling, discharging, and distributing of grain, general merchandise, and iron ore. Warehouses are provided to meet all requirements, both as regards import and export goods. **The Public Graving Dock.**—This is a public graving dock, in which shipowners may employ their own labour and find materials. All necessities for securing ships are supplied by the dockowner at moderate charges. **Dock dues** (which are very reasonable) and all other information can be obtained on application at the Bute Docks Office. **Dimensions:**—Length from caisson to head of dock 600ft; length on blocks 580ft; W. of E. 60ft. Vessels can be docked at any time irrespective of tides. **Steam Packet Harb.** with bridge and floating pontoon, **DHW.** **ST.** 33ft 3in; **NT.** 23ft 3in. Steam crane to lift 6 tons. Pier head crane to lift 4 tons. Channel coal staith, for tug-boats and coasters, worked by hydraulic power, **DHW.** **ST.** 28ft; **NT.** 18ft. **LW.** Pier, with floating pontoon and hydraulic lift; hydraulic crane to lift 10 tons, **DHW.** **ST.** 43ft 8in; **DLW.** **ST.** 5ft 8in; **DHW.** **NT.** 33ft 8in; **DLW.** **NT.** 15ft. **West Bute Dock.**—Entrance to basin, 45ft wide; basin (area 1½ acres) 300ft long, 200ft wide; lock 152ft long, 36ft wide; dock (area 18 acres) 4,000ft long, 200ft wide; quayside 8,800ft long; **DW.** in dock 19ft and 13ft, viz., 1,550ft of 19ft deep, 2,450ft of 13ft deep; **DW.** on sill **OST.** 28ft 9in; **NT.** 18ft 9in. There are 13 staiths for the shipment of coal. The ballast cranes (four in number) are capable of discharging 100 tons per hour. Cranes (four in number) to lift 10 tons. Graving dock 235ft long, 40ft W. of E., 12ft deep. **East Bute Dock.**—Sea

lock 220ft long, 55ft wide ; basin (area 2½ acres) 380ft long, 250ft wide ; inner lock 200ft long, 49ft wide ; dock (area 44 acres) 4,300ft long, 300 and 500ft wide, viz., 1,000ft long by 300ft wide, 3,300ft long by 500ft wide ; quayage 9,360ft long ; DW. in dock 25ft ; DW. on sill of sea lock OST. 31ft 9in ; NT. 21ft 9in. There are 19 staiths in the dock and one in the basin for the shipment of coal, with the latest improvements in hydraulic machinery. The Bute Docks are supplied with the most modern machinery, the greater portion of which is worked by hydraulic pressure. Amongst the appliances are coal staiths, fixed and movable, some capable of shipping 300 tons per hour, about 60 cranes, a large number of which are movable and worked by hydraulic power, lifting up to 20 tons ; powerful shear legs, capable of lifting up to 60 tons ; hydraulic capstans, for discharging timber and assisting in the moving of vessels, &c. Large warehouses and transit sheds. Warrants are issued on all goods in the dockowners' custody. Rys. G.W., R., T.V., L. & N.W., M., Rhymney and B. and M. The Windsor Slipway, between Cardiff and Penarth, is capable of taking the largest vessels.

Charges.—Dock rates from 1d to 9d per ton. Loading charges (trimming coal) 2½d to 6d per ton cargo. Wharfage and labour charges very reasonable. Ballast 6d to 1/1 per ton. Sundry dues.

Pilotage.—District. The port of Cardiff and that portion of the Bristol Channel eastward of Lundy Island up to and including Kingroad and the river Rhymney to Rhymney Bridge. **Rates per vessel:**—Between any dock or harb. in the port of Cardiff, and any point in Cardiff Roads, or *vice versa*, for vessels laden and unladen :—

	£	s.	d.		£	s.	d.
If under 60 tons	0	5	0	500 and under 600 tons...	1	7	6
60 and under 100 tons ..	0	7	6	600 " 800 "	1	10	0
100 " 150 " ..	0	10	0	800 " 1,000 "	1	15	0
150 " 200 "	0	12	6	1,000 " 1,300 "	2	10	0
200 " 250 "	0	15	0	1,300 " 1,500 "	3	0	0
250 " 300 "	0	17	6	1,500 " 1,700 "	3	10	0
300 " 400 "	1	1	0	1,700 tons and upwards	4	0	0
400 " 500 "	1	5	0				

From the port of Cardiff to any part of the Bristol Channel, between Lundy Island and Kingroad, for a duly licensed pilot :—

	Between Cardiff Roads and Nash or Kingroad, or any Point East of Nash and West of Kingroad.	Between Cardiff Roads & Combe, or any Point West of Nash and East of Combe.	Between Cardiff Roads & Lundy Island, or any Point West of Combe.
	£ s. d.	£ s. d.	£ s. d.
If under 150 tons	0 15 0	1 5 0	2 0 0
150 and under 200 tons	0 17 6	1 10 0	2 7 6
200 " 300 " ..	1 0 0	1 17 6	2 17 6
300 " 400 " ..	1 5 0	2 5 0	3 5 0
400 " 500 " ..	1 7 6	2 10 0	3 10 0
500 " 600 " ..	1 10 0	2 15 0	4 0 0
600 " 800 " ..	1 15 0	3 0 0	4 7 6
800 " 1,000 " ..	2 0 0	3 15 0	5 10 0
1,000 " 1,250 " ..	2 10 0	4 15 0	7 0 0
1,250 tons and upwards	3 0 0	5 15 0	8 10 0

Any pilot required to remain on board any ship or vessel shall be paid 10/ per day for every day he may be employed. For moving

any ship or vessel from one dock or tidal harb. to another dock or tidal harb., occupying only one tide, not ex. 100 tons reg. 5/; 100 and not ex. 300, 10/; 300 and not ex. 500, 12/6; 500 and not ex. 800, 17/6; 800 and upwards £1 5s.

Towage.—In Bute Docks:—

Reg. tons.	Reg. tons.	Reg. tons.	Reg. tons.
Under 50	3/9	Over 900 and under 1,000...	30/0
Over 50 and under 100...	5/3	„ 1,000 „ 1,100...	33/9
„ 100 „ 200...	7/6	„ 1,100 „ 1,200...	37/6
„ 200 „ 300...	11/3	„ 1,200 „ 1,300...	41/3
„ 300 „ 500...	15/0	„ 1,300 „ 1,400...	45/0
„ 500 „ 700...	18/9	„ 1,500	48/9
„ 700 „ 900...	22/6		

and 3/ for every additional 100 tons or portion thereof. **Coasting Towage.** Inwards in ballast 1½d; inwards with cargo 2d; outwards with cargo 2d reg. ton.

Officials.—Offices, Bute Docks; Gen. Man., Sir W. T. Lewis; Sec., T. F. Pitman; Engineer, Charles L. Hunter; Dock Master, Ralph Pomeroy; Accountant, E. A. Hart; Joint Colls. of Dues, H. Lander and D. Edmunds; Warehouse-Keeper, &c., J. J. P. Burt; Traffic Man., D. Morgan.

CARDIGAN, Cardiganshire. Lat. 50° 32' N; long. 4° 20' W. Pop. 3,669. Auth. The Mayor and Town Council. P. NC. THW. f. and c. 7h 1m; Sp. rise 12ft; N. rise 9ft. D. on bar at ST. about 14ft HW. and about 9ft NT. There may be a foot or two greater depth within the bar, but at LW. there is not a boat passage. Ry. G.W. Tr. —I. Coal, culm, limestone, patent manures, timber; E. Bricks, slates, flags, earthenware. LV. Vessels of 12 to 13ft dft. can enter the port; they must wait at that dft. for HT. Accn. Warehouse accn., one small crane. Patent slipway at Newquay, 389ft long, 20ft wide. H. of T. ST. 10ft; NT. 5ft. Cradle 105ft long.

Charges.—No port charges.

Pilotage.—District not defined. No pilotage charges.

Towage.—As per agreement.

Officials.—Supt., F. Layzell; Second Officer of Cust., D. Cronin.

CARLINGFORD, Co. Louth. Lat. 54° 13' N; long. 6° 11' W. Auth. Grand Jury, Co. Louth. Secretary, T. F. Filgate. Accn. A tidal harb. D. 10 to 15ft HWST. LV 650 tons. W. prev. W. New pier shelters from all winds. THW. f. and c. 11h 0m. Dry at LWST. Depth at entrance HWST 15ft, and depth along quay 15ft to 10ft. Tides 15 minutes later than Dublin.

Officials.—Co. Surveyor, Dundalk, P. Lyman; Harb. Master, James Salmon.

CARLINGFORD LOUGH.—Auth. Commrs. under a Provisional Order, the Piers and Harbours Confirmation Acts 27 and 28 Vict. c. 93; also Amended Orders 1868, 1874, 1875, and 1884. D. on bar 16ft LWST. LV. 2,000 tons, drawing 24ft.

Charges.—A free port of refuge. Tonnage Rates.—For every sailing vessel of and under 300 tons reg. entering Carlingford Lough and discharging cargo there, 2d per reg. ton; for every sailing vessel exceeding 300 tons reg. entering Carlingford Lough

and discharging cargo there, 3d per registered ton ; for every steam vessel entering Carlingford Lough and discharging or loading cargo there, which for loading or unloading is dependent on tidal waters, within the harbour, 1½d per reg. ton ; for all other steam vessels entering Carlingford Lough and discharging or loading cargo there, 6d per reg. ton ; for every vessel entering Carlingford Lough for refuge without delivering or loading cargo there : being sailing vessels exceeding 100 tons register, and steam vessels exceeding 150 tons reg., but not in case of any kind of vessel exceeding 500 tons reg., 2d per reg. ton ; being sailing vessels or steam vessels exceeding 500 tons reg., 3d per reg. ton. Exemptions. All sailing vessels of and under 75 tons reg., and all steam vessels of and under 100 tons reg. ; all sailing vessels of and under 150 tons reg., and all steam vessels of and under 200 tons delivering or loading cargo at the town or in the river of Newry, north of Old Narrow Water Castle. Anchorage Dues.—Ship or barque, foreign or coasting trade, £1 1/ ; brig or brigantine, foreign trade, 10/6 ; schooner or galliot, foreign trade, 3/ ; brig or brigantine, coasting trade, 5/ ; schooner, coasting trade, 4/ ; sloop, coasting trade, 3/ ; smack or wherry, coasting trade, 2/ ; steam packet, each voyage, 5/.

Official.—Sec., Capt. Thomas Smith, Greenore.

Hotels.—Greenore, L. & N.W. Ry. ; Rostrevor, "Mournes" ; Warrenpoint, several ; Meath, "Strand."

CARMARTHEN, Carmarthenshire. Lat. 51° 22' N. ; long 4° 20' W. On the Towy. **Rys.** Manchester, Milford, Pembroke, and Tenby. **Auth.** Town Council (Clerk, R. M. Thomas). **Accn.** For small vessels. **D.** at LW. 2ft, and 26ft at HWST. **W.** prev. SW **D.** at Carmarthen Quay 12ft HWST., and at Blackpoole 17ft. **THW.** 6h 2m. No dues. A lifeboat station at Ferryside, mouth of river.

Charges.—Quay dues from 1/ to 5/ ; Cranage 4d per ton.

Pilotage.—£2 10/ to £3 from Tenby to Blackpoole, up and down ; £1 from Ferryside to Carmarthen.

Towage by Bristol Steamer 4d per ton reg.

Official.—Harb Master, John Rees.

CARNARVON, Carnarvonshire. On the Menai Straits. Lat. 53° 6' N ; long. 4° 30' W. **Pop.** 10,258. **Auth.** Harbour Trustees, under Acts 33 Geo. III. c. 123, 49 Geo. III., c. 24, and the Carnarvon Harb. Order, 1874. **P. C. THW.** f. and c. 9h 27m. Sp. rise 15½ft ; N. rise 12ft. **D.** on bar, least, 7ft. **W.** prev. from SW. ; most dangerous from WNW. **Ry.** I. & N. W. **Tr.**—I. Timber, grain, coals ; E. Principally slate. **LV.** which have entered at tide time have been from 175 to 309 reg. ton. **Accn.** Area of basin or dock 4a 3r 6p. Depth of water at entrance 12ft at HWOT., 15½ft ST. Quayage space 582yds long. The basin or dock is available for vessels to enter from half to high tide. Area of harb. and basin 24a 1r 6p. Slipways :—

Name.	Length.	Width.	H. of T.		Cradle. Length.
			ST.	N.	
Patent Slip	ft. 328	ft. in. 17 10	ft. 8	ft. 6	ft. 84
Gridiron	120	—	—	—	—

Charges.—Harb. dues : outward 1½d reg. ton ; inward 1d with coal only ; other cargoes 2d.

Pilotage.—District. From the outwardmost buoy on the bar of Carnarvon, into and out of Carnarvon harb., and in the Menai Strait, to Port Dinorwic, or Moel-y-Don, and *vice versa*. **Rates:—**

Distances.	7 ft and under.	8 ft	9 ft	10 ft	11 ft	12 ft	13 ft	14 ft	15 ft	16 ft	17 ft	18 ft	19 ft
From the Outwardmost Buoy on the Bar to the Anchorage off the Town or the lawful Quays, and <i>vice versa</i>	10	11	12	14	16	17	25	35	45	55	70	90	120
From the Anchorage off the Town or the lawful Quays to Port Dinorwic, or Moel-y-Don, and <i>vice versa</i>	4	4							15	17	20	25	30
From the Anchorage off the Town or the lawful Quays (no Swellies pilot offering) to Cadnant, through the Swellies, and <i>vice versa</i>	6	8	9	10	11	12	13		15	16	17	18	—
From Port Dinorwic, or Moel-y-Don (no Swellies Pilot offering) to Cadnant, through the Swellies, and <i>vice versa</i>	4	6	6	7	8	9	9	10	11	12	12	13	—

For half a foot exceeding the above draughts of water, the medium between the rates stated in the above table. For intermediate distances, a proportionate rate. Pilots boarding vessels outside or to seaward of the outwardmost buoy on the bar, are entitled to a further sum of 1/6 per mile for the extra distance from sea to said buoy.

Towage.—As per agreement.

Officials.—Clerk to Trust., J. Jackson; Harb. Mast., W. Griffiths.

CARNLOUGH, Co. Antrim. Lat. 54° 59' N; long. 6° 0' W.

Auth. Owner, Marquis of Londonderry, under Prov. Order, 1882. Used by steamers and by vessels in the limestone and iron ore trade up to 350 tons. D. at LW. 6 ft. W. prev. SW., most dangerous SE., round by E. to NE.

Official.—James Foster.

CARNOUSTIE, Forfarshire, Scotland. Lat. 56° 30' N; long. 2° 40' W. A small harbour, dry at LW.

CARRADALE, Argyllshire. Lat. 56° 36' N; long. 5° 35' W.

Auth. Owner, D. C. R. Carrick Buchanan, of Carradale. There is a pier with water at all times of tide. A good anchorage in offshore winds in from 5 to 7 fms. A place

much frequented in the fishing season. In daily communication with Glasgow; about 20,000 boxes of fish, $1\frac{1}{2}$ cwts. are shipped yearly, and about 2,000 tons of farm produce.

Official.—Harb. Master, Duncan Ritchie.

CARRICKFERGUS, Co. Antrim. Situated in Belfast Lough. Lat. $54^{\circ} 39' N$; long. $5^{\circ} 53' W$. Ry. Harb. Junction. Auth. Harb. Commrs., under Prov. Order, 1862, confirmed by Act of Parliament. Accn. Tidal harb. 1,200ft by 500ft. En. 80ft wide. D. 14ft HWST. D. in old harb. 8ft HW. Dry docks and slipway. THW. f. and c. 10h 40m.

Charges.—On vessels 3d per ton, vessels in ballast $1\frac{1}{2}$ d, and 1d per ton for harb. boat. Crane 1d per ton.

Officials.—Town Clerk, James Boyd; Harb. Master, David Robb.

CARSETHORN.—A creek of Dumfries 12 miles below Dumfries. An open beach. D. HWST. 18ft, HWNT. 10ft.

Official.—Collector, James Harris.

CART RIVER.—See Paisley.

CARTY.—A creek of Dumfries.

CASTLEHAVEN, island near Barlogue, Ireland. Lat $51^{\circ} 30' N$; long. $9^{\circ} 10' W$. Accn. for vessels drawing up to 12ft.

CASTLEHILL, Caithness, near Thurso. Auth. Messrs. J. C. Brodie & Sons. Accn. Three loading berths. D. 10ft to 14ft HWST; 2 ballast berths, D. 7ft to 10ft HWST; a basin affording room for 3 vessels from 100 to 150 tons. W. only dangerous, WNW. Tr.—Paving stone. I. Coals, lime, manures, &c.

CASTLEMAINE, co. Kerry. Lat. $52^{\circ} 10' N$; long. $9^{\circ} 43' W$. A tidal quay. Auth. Grand Jury of co. Kerry. Safe anchorage for small vessels. D. on bar 10ft LW. THW. f. and c. 3h 30m.

CASTLETOWN, Co. Cork.—See Berehaven. Anchorage and pier in Bantry Bay. Vessels of 400 tons lie here. D. alongside pier 11ft HWST., 8ft HWNT.

Official.—Harb. Constable, J. Harrington.

CASTLETOWN.—See Isle of Man.

CASTLE TOWNSEND, Co. Cork. Lat. $51^{\circ} 35' N$; long. $9^{\circ} 15' W$. A small place under the port of Skibbereen. D. HWST. 24ft, HWNT. 21ft.

CATTEWATER.—See Plymouth.

CELLARDYKE, Fifeshire. A fishing village under the port of Kirkcaldy. D. HWST. 14ft, HWNT. 9ft

CEMMAES, or Kemmaes, Anglesea. Lat. $53^{\circ} 25' N$; long. $4^{\circ} 28' W$. A small harb. with 7ft at LW., and with 15ft range of tide. Used by vessels drawing 12ft to 14ft. No vessel can enter at LW. A lifeboat station. Auth. A committee, self-elected.

Official.—W. Jones, Buarthyfoel, Amlwch.

CHANNEL ISLANDS.—Alderney, Guernsey, Jersey.
 Lat. $49^{\circ} 46' N$, $49^{\circ} 26' N$, $49^{\circ} 15' N$;
 long. $2^{\circ} 12' W$, $2^{\circ} 37' W$, $2^{\circ} 5' W$. Alderney.—Pop. 3,100.
 THW. f. and c. 6h 46m; Sp. rise $17\frac{1}{2}$ ft; N. rise $12\frac{1}{2}$ ft. Auth.
 Admiralty and Woods and Forests and War Depts. LV. HMS.
Mistletoe at LWST. D. at entrance LWST. 127ft. Harbours are
 at Braye and Crabby, and dry at LW. Vessels drawing 14ft enter
 at HW. W. prev. are Easterly, but the most dangerous are those
 from ENE. leading into the harb. The harbours on the north
 side of the island, are formed by a pier or breakwater 1,609yds
 in length. Area 196 acres. No docks. Depth at breakwater
 is from 21ft inner end to 134ft outer end.

Charges.—Harb. dues, inwards 6d reg. ton, outwards 3d reg.
 ton. Steamers carrying mails 5/ inwards and 2/6 outwards, per vessel.
 Additional on coal-laden vessels $1\frac{1}{2}$ d ton on cargo. Anchorage and
 chainage 6d to 10/ each per vessel. All vessels pay 2/ pier pass.

Pilotage.—7d. per ton.

Official.—Harb. Master, F. Brice.

Guernsey. Auth. States of the Island of Guernsey, under
 Treasury Warrant, Oct. 9, 1875. *St. Peter's Port.* Pop. 32,500.
 THW. f. and c. 6h 37m; Sp. rise 32ft; N. 20ft. Three piers
 with landing stages. D. at LW. equi. ST. 5, 10, and 13ft
 respectively. W. prev. SE. to SW. Two patent slips with cradles
 145ft long, with 15ft of water on the heads of cradles at HW. equi.
 ST. Hauling by steam. *St. Sampsons.* An average D. of W. at
 OST. 12 to 20ft. En. dry at LWST. W. prev. SE. to SW.

Charges at both these Ports. Harb. and tonnage dues 3d to 9d
 per ton. Charges on cattle, &c. 5d to 4/5 each. Charges on goods,
 timber, &c. 2/6 per ton, &c.

Official.—Harb. Master, Captain W. C. Jones.

Jersey. Pop. 53,000. Auth. States of the Island of Jersey.
 Tr.—I. Woollen fabrics, hardware and cutlery, glass, soap, &c.;
 E. Granite, cattle, butter, fruit, potatoes, oysters, &c. Railway
 accommodation. *St. Heliers.* THW. f. and c. 6h 29m; Sp. rise
 $31\frac{1}{2}$ ft.; N. rise 23ft. Dry at LW. Area of Victoria and Albert Harbs.
 32 acres; old harbs. 13 acres. Piers carried into 14ft LWST.; about
 8,000ft space. W. prev. SW., but WSW. most dangerous. LV.
 vessels of 300 tons reg. can lie at Old North Pier. Accn. at Albert
 Pier or Victoria Harb. for those of 800 tons, as there is no water
 between the pier heads at LWST. vessels can only get to berth
 from half flood to two hours ebb. Charges—Harb. dues 9d to 1/
 ton; Harb. Master's fee 1d ton. Good cranage accommodation
Gorey, a pier 900ft long by 30ft wide. D. at pier heads HWST
 29ft, HWNT. 14ft.; LWST. dry; LWNT. 3ft. W. prev.
 Westerly; most dangerous Southerly. LV. 300 tons. Charges.—
 6d, 8d, and 1s per ton. *Rozel.* THW. f. and c. 6h 15m; Sp.
 rise 30ft; N. rise $21\frac{1}{2}$ ft. D. at pier head HWST. 29ft; HWNT.
 14ft.; LWST. dry; LWNT. 3ft. W. prev. Westerly; most
 dangerous, Easterly. *St. Aubins Harb.* 3 and $1\frac{1}{2}$ acres. En.
 dry at HW. W. prev. WSW. Charges—8d to 1/ per ton.

ST., and those of 5ft at N. *Mostyn* imports a large quantity of iron ore and timber, and exports coal, &c. Wild Roads at entrance of the river Dee is a safe and commodious place where large vessels may lie at anchor and discharge into lighters. Sp. rise 18ft, N. 10ft. THW. f. and c. oh 16m.

Charges.—Anchorage toll, throughout the river 1/- per vessel.

Pilotage :—Foreign Pilotage Rates (INWARD) per foot—

FROM	To								
	Wild Roads.		Mostyn.		East of Mostyn to Connah's Quay.		East of Connah's Quay.		
	Wn.	Sm.	Wn.	Sm.	Wn.	Sm.	Wn.	Sm.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
The Great Ormeshead	7	06	08	07	08	67	69	08	0
Inside of N.W. Patch Buoy, or Bar Buoy, North Deep or Fairway Buoy in Hilbre Swash.....	6	05	07	06	07	66	68	07	0
Inside Earwig or South Hoyle Buoy, or Hilbre Island	5	04	06	05	06	65	07	06	0
Wild Roads .....	...	...	3	02	05	65	06	65	6

Foreign Pilotage Rates (OUTWARD) per foot—

FROM	To								
	Wild Roads.		Mostyn.		Sea.				
	Wn.	Sm.	Wn.	Sm.	Wn.	Sm.	Wn.	Sm.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
East of Connah's Quay.....	5	04	66	05	0	...	7	06	0
Connah's Quay to East of Mostyn	4	64	05	64	6	...	6	05	0
Mostyn	3	02	0	...	...	...	6	05	0
Wild Roads .....	...	...	3	02	0	...	5	64	6

7 6 per tide shifting ; 7 6 per day if detained on board within the district ; 10 6 per day if taken outside district, and travelling expenses.

|| Coasting Pilotage Rates (INWARD) per foot—

FROM	To			
	Wild Roads.		East of Mostyn to Connah's Quay.	
	Wn.	Sm.	Wn.	Sm.
	s. d.	s. d.	s. d.	s. d.
Outside the N.W. Patch Buoy, or Bar Buoy, North Deep or Fairway Buoy in Hilbre Swash—vessels 60 tons net register and under	1	3	1	0
Ditto, vessels from 60 tons to 80 tons net register	1	6	1	9
Wild Roads—				
Vessels 60 tons net register and under ..	...	1	3	1
Vessels from 60 to 80 tons net register ..	...	1	6	1

And as to vessels over 80 tons net register, 2d per foot extra for every additional 20 tons net register on each rate respectively.

Coasting Pilotage Rates (OUTWARD) per foot—

FROM	To			
	Wild Roads.	Mostyn.	Connah's Quay.	Sea.
	s. d.	s. d.	s. d.	s. d.
Chester, or any place East of Mostyn, for vessels 60 tons net register, and under ..	1 6	1 6	1 0	2 3
Ditto, from 60 to 80 tons net register ..	1 9	1 9	1 3	2 6
Mostyn—				
Vessels 60 tons net register, and under	1 3	...	1 6	1 9
Vessels from 60 to 80 tons net register ..	1 6	...	1 9	2 0
Wild Roads—				
Vessels 60 tons net register, and under	...	...	...	1 9
Vessels from 60 to 80 tons net register ..	...	...	...	2 0

And as to vessels over 80 tons net register, 2d per foot extra for every additional 20 tons net register on each rate respectively. 5/ per tide shifting; 5/ per day if detained on board within the district; 7/6 per day if taken outside district, and travelling expenses.

NOTE.—Winter Season commences October 1, and ends March 31. Coasters pay one-half the above rates. No vessel to pay for less than 8ft dft., nor to pay for odd inches under or over half a foot. Also 5/ day for each day the pilot is kept on board.

Towage.—Vessels discharging at the G.W. Ry. Co.'s wharves free. Custom House is situated at Connah's Quay, Supt., E. Hughes.

Officials.—Clerk to Dee Conservancy Board, S. Smith; Acting Conservator, H. E. Taylor, C.E.; Pilot Master, J. Coppack; Harb. Master, Connah's Quay, Mr. Miller; Tug Owners, Coppack, Carter & Co.

Hotel.—"Hare and Hounds."

CHICHESTER, Sussex. Lat. 50° 46' N; long. 0° 55' W. Ry. L.B. & S.C. Harb. is 2m from the city, and is an inlet of the English Channel, containing Thorney Island. D. 2ft LW. THW. f. and c. 11h 45m.

CHRISTCHURCH, Hampshire. Lat. 50° 44' N; long. 1° 45'. Situated between the Avon and the Stour. Harb. dries at LW. There is a double tide in the bay. THW. f. and c. 9h 0m.

CHURCH BAY, Holyhead.—See Sutan.

CINQUE PORTS. Originally five in number, but afterwards increased to eight, viz., Dover, Sandwich, Hythe, and Romney, in Kent, and Rye, Winchelsea, Hastings, and Seaford, in Sussex. These ports formerly had important privileges, and were bound to furnish a certain number of ships of war to the sovereign in return. The first Charter was granted by William I. in 1078. The Lord Warden of the Cinque Ports is also Constable of Dover Castle.

CLACKMANNAN, Clackmannanshire.—See Kennetpans. On N. Bank of Firth of Forth, 27 miles above Queensferry. Lat. 55° 5' N; long. 3° 51' W. 7m E. of Stirling, at the junction of the rivers Devon and Forth. D. HWST. 18ft. and HWNT. 14ft. THW. at f. and c., 10.0. Rys. N.B. The port is a private one used for shipping coals by the Clackmannan Coal Co. Steam cranes. Steamers up to 1,000 tons load. Bed, soft mud 6ft deep.

Charges.—1d per ton reg.

Official.—J. A. Lange.

CLARE CASTLE, Co. Clare, Ennis, Ireland. Lat. $52^{\circ} 49' N$; long. $8^{\circ} 57' W$. Situated on the river Fergus. Ry. L. & E. Auth. Trustees, under Act 9 and 10 Vict., c. 86. Accn. Quayage 700ft. sheltered from all winds. Dry at LW. D. in river 18ft to 22ft. Used by vessels up to 500 tons.

CLAY.—See Blakeney.

CLEVEDON, Somerset, near Avonmouth, Bristol Channel. Auth. Clevedon Pier Co. A pier 840ft long. D. at pier head at HWST. 45ft, and 7ft LWST.

Charges.—2d per person landing or embarking. No cranes.

Officials.—Sec., H. C. Fry, Clevedon; Pier Master, W. Mants.

Hotel.—"Royal Pier."

CLIFDEN, Co. Galway.—See Ardbear. Lat. $53^{\circ} 30' N$; long. $10^{\circ} 0' W$. A pier belonging to the Grand Jury of Co. Galway. D. HWST. 12ft, HWNT. 7ft. Dry at LW. Used by small coasters. Sometimes vessels of 100 to 200 tons load and discharge at pier. and vessels of 800 tons have discharged in bay. W. prev. SW. THW. f. and c. 4h 30m.

Official.—Edward Kendall, Clifden.

CLONIKILTY, Co. Cork. Lat. $51^{\circ} 35' N$; long. $8^{\circ} 50' W$. Pop. 3,600. D. HWST. 12ft, HWNT 8ft, alongside quay. No harb. dues.

Official.—Harb. Master, R. E. Honner.

CLONTARF, on N. side of Dublin Bay. D. HWST. 9ft, HWN. 7ft.

CLOVELLY, Devonshire. Lat. $51^{\circ} 0' N$; long. $4^{\circ} 23' W$. A small harb. dry at LW. Auth. Owner, Mrs. Christine Louisa Hamlyn. W. prev. W. to N. and NE. Protected by a small breakwater. Dry till half flood. D. from 3ft to 8ft. THW. f. and c. 6h 0m. A lifeboat station.

Officials.—T. J. Pitts Tucker, Barnstaple; Harb. Master, W. Moss.

Hotels.—"Red Lion" and "New Inn."

CLYTH, Caithness (see Auchinaster). Lat. $58^{\circ} 17' N$; long. $3^{\circ} 15' W$. A fishing harbour. D. HWST. 11ft, HWNT. 8ft.

Official.—Harb. Master, J. Sutherland.

COCKENZIE, Haddingtonshire, Scotland. Lat. $55^{\circ} 58' N$; long. $2^{\circ} 55' W$. No harb. authority. Used by fishing boats and by vessels belonging to the Tranent Collieries. THW. f. and c. 2h 16m. Depth at HWST. 15ft to ft. Prevailing and most dangerous winds, SE. Harb. Master, J. Ross.

Official.—Owner, John Polson, Esq., Castle Leven, Greenock.

COLCHESTER, Essex. Lat. $51^{\circ} 52' N$; long. $0^{\circ} 49' E$. Pop. 28,374. Auth. Colchester Navigation Improvement Commissioners, under Act 10 and 11 Vict., c. 281. P.NC. THW. (Colne Point) 12h; Sp. rise 14ft; N. rise 10ft; R. of N. 6ft. D. on bar. Sp. 10ft; N. 5ft; in channel HW. 18ft to 20ft. Bar dries at LW. It is at Colnemouth, some miles from Brightlingsea. W. Unaffected by winds. Ry. G.E. Tr.—I. Grain, timber, &c.; E. Oysters and local produce. LV. One of H.M. vessels, 1,200 reg. ton. 160 reg. ton. at Hythe; 300 reg. ton. at the entrance to Wivenhoe. Vessels of 200 tons can

enter channel at LW. One 1-ton crane. Quayage at Hythe 1,485ft. and at Wivenhoe 430ft. Also a patent slipway at the latter place, taking vessels 120ft long, 20ft wide, and drawing 12ft.

Charges.—Harb. dues 1d to 1/6 ton, according to size. Coal dues 6d ton, payable by merchant; vessels bringing coal, half these rates. Ballast 1/ ton put on board.

Pilotage.—District. From a line drawn from the Naze Tower to the buoy of the Gunfleet, up the Colne river to Colchester, and *vice versa*. **Rates** (inward and outward). East buoy of Gunfleet to Eastness 2 6 foot; Eastness to Pyefleet 1 3; Pyefleet to Wivenhoe 1/6; Wivenhoe to the Hythe, Colchester 1/6. A pilot taken on board, or discharged from, a vessel to the eastward of the Priory Spit Buoy, is entitled to £1 in addition to the above rates. London pilots are to be paid from Orfordness to Eastness 6/ foot.

Towage.—As per agreement. Boarding Station at Brightlingsea.

Officials.—Clerk to Coms., Henry Goody; Channel Surveyor, J. W. Starts; Harb. Master, W. Crosby; Coll. of Channel dues, T. M. Johnstone.

Hotels.—The "Cups," "Red Lion," and "George."

COLDINGHAM, near Berwick on Tweed. D. I.W. at en. 20ft.

COLERAINE, Londonderry. On the Bann, 5m from the sea. Lat. 55° 10' N; long. 6° 43' W. **Pop.** 6,684. **Auth.** Harbour Commissioners, under Act, 1879. **P. C.** **THW.** 6h 24m; Sp. rise 6½ft; N. rise 4ft. **D.** on bar 10ft **LWOST.** **W.** prev. from W. to SW., most dangerous from NW. to N. **Ry.** B. & N.C. **Tr.**—I. Coal and general goods, coasting trade; E. Cattle and local produce. **LV.** 372 reg. ton. of about 14½ft dft. It was nearly **HW.** of **ST.** when this vessel crossed the bar. **Accn.** Good quays with about 250ft lin. and a depth at **LWST.** 12ft, **NT.** 14ft.

Charges.—Port charges 6d reg. ton. Ballast as per agreement, usually 1/ ton.

Pilotage.—District. The river Bann. From the quays at town of Coleraine to an imaginary boundary line at sea running through a point northward of the mouth of the river, 1m from end of east pier at its mouth. **Rates.** 1/6 foot inwards, and 9d foot outwards. No printed return exists, and the Harb. Commissioners exempt from pilotage rates all vessels towed into the river by agreement with the owner of a steam tug.

Towage.—Inwards with cargo and out light 6d reg. ton, if with cargo 3d. Pilotage optional when a tug employed.

Officials.—Sec. to Com., W. Eccles; Harb. Master, Edward Steele; Coll. of H.M. Cust., J. Harty.

COLISTON, Aberdeenshire. Lat. 57° 22' N; long. 1° 57' W. A small harb. Dry at **LW.**

CONNAH'S QUAY.—See Chester.

CONWAY, Carnarvon, Wales. Lat. 53° 17' N; long. 3° 50' W. **Ry.** Chester & Holyhead. **Accn.** **D.** on bar 3ft **LW.**, and 20ft **HWST.**, affording entrance to vessels drawing 6ft at half tide. **W.** prev. N.W. to N. **Auth.** Town Council, under Prov. Order, 1878. **THW.** f. and c. 11h 30m.

Charges.—½d per ton anchorage. Quay dues 2d per ton.

Pilotage.—As may be agreed upon.

Officials.—Town Clerk, T. E. Parry; Harb. Master, Evan Evans.

Hotels.—“Castle,” “Erskine Arms,” “Blue Bell,” and “Harp.”

COOMBE MARTIN, Devonshire. Lat. $51^{\circ} 13' N$; long. $40^{\circ} 1' W$. Auth. Owner, Sir C. Watson. There is an anchorage in 8 to 9 fms. THW. f. and c. 5h 50m.

Official.—C. M. Cole, Solicitor, 36, Essex Street, Strand, W.C.

CORK, Munster. On the Lee, 15m from the sea. Lat. $51^{\circ} 47' 33'' N$; long. $8^{\circ} 15' 14'' W$. Pop. 100,000. Auth. Harbour Commissioners, under Statute 1 Geo. IV., c. 52, and by a recent enactment. P. NC. THW. f. and c. 4h 58m; Sp. rise 12½ft; N. rise 10ft. D. in river, Sp. 27ft, N. 24ft HW. Alongside the jetties there are 20ft at LW. and vessels of 23ft dft. can lie afloat at all times of tide at a portion of the deep-water quays. W. prev. The quays of Cork are sheltered from all winds; quays at Queenstown are exposed to S. and SE. winds. Rys. G. & S.W., Cork and Bandon, Cork and Macroom Direct; Cork, Blackrock and Passage. Tr—I. General; E. Grain, butter, provisions, live stock, whisky, porter, &c. LV. using the quays and discharging cargo are grain vessels, which come up to Cork and use the deep-water quays there. These enter the harb. and come up as far as Passage, which is 6½ miles from Cork, at all states of the tide. From Passage to the quays of Cork they are brought up at or near HW. The following are some of the largest vessels which have discharged at the Cork deep-water quays, lying afloat at all states of the tide, viz. :—

Name.	Draught of Water.		Registered Tonnage.
	ft.	in.	
s. <i>Alicia</i>	27	9	1,839
s. <i>Potomac</i>	20	8	1,198
s. <i>Eclipse</i>	20	6	1,301
<i>Star of England</i>	21	0	1,570
s. <i>Eastburne</i>	21	6	1,508
s. <i>Iris</i>	21	6	1,433
s. <i>Panama</i>	21	0	1,367
s. <i>Le Charlotier</i>	22	0	1,449
<i>Rufus E. Wood</i> ..	21	0	1,405
s. <i>Dragon Fly</i>	21	0	1,134
s. <i>Lord Derby</i>	21	9	1,132

Cork Harb. is one of the most capacious and secure harb. in the British Islands. Water area at Cork between quays is 46½ acres, with a maximum depth of 23ft at LWST. There is a timber wharf on piles, 200ft in length, at Penrose Quay, Cork, with 15ft at LW; a timber wharf on piles, 290ft long, at ballast quay, Queenstown, with 11ft at LW; timber wharves on piles at Victoria and Penrose Quays, Cork, total length 1,245ft, with a depth alongside of 20ft at LWST; a deep-water quay at Queenstown, affording a depth alongside of 24ft at LWST, 600ft long on river face; deep-water quay, at Cork, 660ft in length, with a depth alongside of 23ft at LWST; deep-water quay at Cork, 1,405ft in length, with a depth alongside of 20ft at LWST; landing-piers or quays for the use of passenger steamers and other small craft at Ballinacurra, East Ferry, Crosshaven, Ringaskiddy, and Blackrock;

boat-harb. at Queenstown, with breakwater for shelter and accommodation for small boats. The river Lee is navigable for ships of the largest class for about 2½ miles above Haulbowline to Passage West, whence the river channel to Cork is 5½ miles long by 250ft to 300ft wide, with 14ft depth at LWST. The quays along the river Lee are under the jurisdiction of the Harb. Commissioners. The greatest depth alongside quays in Queenstown Harb. at LW is 24ft at new deep-water quay. Altogether the quayage space is upwards of four miles in length, with a depth of from 7ft to 23ft at LW. Dry Docks, &c. :—

Name.	Length	Width	Depth of sill at OHW.
	ft.	ft.	ft.
Rushbrook Dry Dock	430	60	9
Do. Gridiron	130	28	1
Cumming's do. Carrigaloe	250	40	
Victoria Dry Dock, Passage West	365	82	19 to 21
Albert Treble Dry Docks, Passage West	221	54	16 to 19
	104	54	16 to 19
	193	54	16 to 19
Water St., Dockyard Patent Slip	250	38	
Harb. Comrs. Yard Patent Slip	240	35	

Charges.—Tonnage dues from ½d to 1/ per ton. Dues on goods.

Pilotage.—District. The river, harbour, and port of Cork, the southern or seaward boundary being a straight line extending from Poor Head on the east, to Cork Head on the west. Rates for all vessels, inwards or outwards :—

Vessels or Lighters.	To Queens-town In-wards.	From Queens-town Out-wards.	To Passage In-wards.	From Passage Out-wards.	To Cork In-wards.	From Cork Out-wards.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Under 80 tons	0 11 3	0 3 9	0 15 0	0 5 0	1 5 4	0 3 5
80 and under 120....	1 1 1	0 7 1	1 3 5	0 7 10	1 13 9	0 11 3
120 " 160....	1 8 2	0 9 4	1 17 6	0 12 6	2 3 2	0 16 8
160 " 220....	1 17 6	0 12 6	2 6 10	0 15 7	2 15 0	0 18 9
220 " 300....	2 16 3	0 18 9	3 11 3	1 5 0	3 16 3	1 11 3
300 " 400....	3 5 8	1 1 10	4 3 2	1 8 1	4 15 8	1 14 4
400 " 500....	3 15 0	1 5 0	4 13 9	1 11 3	5 10 0	1 17 0
500 " 600....	4 2 6	1 10 0	5 1 3	1 16 3	0 0 0	2 2 6
600 " 700....	4 10 0	1 15 0	5 8 9	2 1 3	0 7 6	2 7 6
700 " 800....	4 17 6	2 0 0	5 16 3	2 6 3	6 15 0	2 12 6
800 " 900....	5 5 0	2 5 0	6 3 9	2 11 3	7 2 0	2 17 0
900 " 1,000....	5 12 6	2 10 0	6 11 3	2 16 3	7 10 0	3 2 6

And inwards—for all vessels and lighters 6/ to be added for every 100 tons or surplus fraction (not being less than 50 tons), of every 100 tons over 1,000 tons up to and including 2,000 tons surplus, and for every 100 tons, or like fraction of 100 tons, over 2,000 tons surplus, as far as a vessel of 5,000 tons inclusive, 3/; and outwards—for all vessels and lighters 4/ to be added for every 100 tons or surplus fraction (not being less than 50 tons), of every 100 tons over 1,000 tons, up to and including 4,000 tons surplus. The excess over 5,000 tons is not charged with pilotage rate, either inwards or outwards. For every vessel or lighter, British and

foreign, using a pilot, only within the limits in this table, coasters and colliers included:—

Vessels or Lighters.	Queens- town to Pass- age.	Passage to Queens- town.	Queens- town to Cork.	Cork to Queens- town.	Passage to Cork.	Cork to Pass- age.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Under 20 tons	0 6 0	0 4 0	0 9 0	0 6 0	0 6 0	0 4 0
80 and under 120....	0 8 0	0 5 8	0 12 6	0 8 2	0 8 0	0 6 4
120 .. 160....	0 10 0	0 6 8	0 15 0	0 10 0	0 10 0	0 6 5
160 .. 220....	0 12 6	0 8 4	0 17 6	0 12 0	0 12 6	0 8 4
220 .. 300....	0 15 0	0 10 0	0 1 0	0 13 4	0 17 6	0 12 8
300 .. 400....	0 17 0	0 12 0	1 10 0	1 0 0	1 0 0	0 13 4
400 .. 500....	1 0 0	0 13 4	1 15 0	1 3 4	1 5 0	0 16 8
500 .. 600....	1 2 6	0 15 0	1 17 6	1 5 0	1 7 6	0 18 4
600 .. 700....	1 5 0	0 16 8	2 0 0	1 6 8	1 10 0	1 0 0
700 .. 800....	1 7 6	0 18 4	2 2 6	1 8 4	1 12 6	1 1 8
800 .. 900....	1 10 0	1 0 0	2 5 0	1 10 0	1 15 0	1 3 4
900 .. 1,000....	1 12 6	1 1 8	2 7 6	1 11 8	1 17 6	1 5 0

Add 2/6 for every 100 tons or surplus fraction (not being less than 50 tons), of every 100 tons over 1,000 tons, up to and including 4,000 tons surplus above 1,000 tons as far as a vessel of 5,000 tons inclusive. The excess over 5,000 tons is not charged with pilotage rate. The rates to and from Monkstown, and to and from the East Ferry, are the same as those to Passage; and the rates to and from Ballinacurra are the same as those to Cork. Vessels or lighters proceeding to Blackrock, or higher up, pay the same rates as to Cork, or lower down than Blackrock pay the same rates as to Passage. Pilot, in case of extra detention in the vessel or lighter, north of the southern limits of the port, to be paid 5/ per day in addition to his pilotage. Any pilot placing a vessel or lighter in any berth to which a harb. master objects, shall remove her without charge. No pilot is allowed to make terms; 5/ in addition to pilotage allowed for mooring.

Towage.

From SEA to QUEENSTOWN, and *vice versa*.

Tons	Under 200	Rate	£ s. d.
"	300	"	2 0 0
"	400	"	2 10 0
"	500	"	3 0 0
"	600	"	3 10 0
"	700	"	4 0 0
"	800	"	4 10 0
"	900	"	5 0 0
"	1,000	"	5 10 0

Adding 10/ for every 100 tons, or part of same. From Sea or Queenstown to Cork, 6d per reg. Ton, down towage free. From Sea or Queenstown to Passage, 4d. per reg. ton, down towage free. From Passage to Cork, 3d. per reg. ton, down towage free. Steamers:—Attendance, Queenstown or Passage to Cork, or *vice versa*, £7 per tug per tide.

Officials.—Sec. to Com., W. Donegan; Engineer, P. Barry, M.I.C.E.; Coll. of Harb. and tonnage dues, J. P. Lyons; Harb. Master, N. Sutton; Deputy Harb. Master at Queenstown, G. Usborne.

Hotels.—The "Imperial" and "Victoria."

COURTOWN, Wexford, Ireland. Lat. $52^{\circ} 39' N$; long. $6^{\circ} 14' W$. Auth. Commissioners, under Act 5 Geo. IV., 1824. Accn. Works undergoing repairs. D. 2ft on bar at LWST. W. prev. SW., most dang. SE. A lifeboat station.

Charges.—Harbour dues, $\frac{1}{4}d$ per ton, $1/$ per ton charged for cargoes landed from colliers lying outside; fishing boats pay £1 a year when laid up on slip during the winter, and £1 5s if left in harbour basin.

Official.—Harb. Master, G. Mordaunt.

COVE, Berwickshire, Scot. Lat. $55^{\circ} 58' N$; long. $2^{\circ} 18' W$. Auth. Owner, B. F. Hall, of Cockburnspath. Accn. Stone piers. D. at HW. 20ft. W. prev. E and NE. LV. 300 tons.

COWES, Isle of Wight, Hampshire. On the Solent and river Medina. Lat. $50^{\circ} 46' N$; long. $1^{\circ} 18' W$. Pop. 7,000. Auth. Corporation of Newport, I. of W.; P. NC. THW. f. and c. 10h 45m, and 11h 45m.; Sp. rise $12\frac{1}{2}ft$; N. rise $9\frac{1}{2}ft$. D. on bar at LW. 10ft; ST. 22ft to 23ft; N. 18ft to 19ft. W. prev. SW by W.; most dangerous are N. and NE. Rys. Ryde, Newport, and Cowes. Tr.—I. Timber, grain, coals, &c.; E. Cement, stone, bark, &c. LV. The roadstead of Cowes affords a safe and sheltered anchorage for vessels of any tonnage. Vessels discharge at railway jetty about 300ft. in length. There are several patent heaving up slipways for vessels up to 1,500 tons. Dry Docks, &c.:—

Name.	Extreme Length.	Breadth at en.	Depth on sill OHW.	Ht. of Tide.		Owner.
				Sp.	N.	
	ft.	ft.	ft.	ft. in.	ft. in.	
East:—						
No. 1, Gridiron	110	20	..	12 6	10 6	C. Hansen & Sons
" 2. "	90	25	..	11 0	9 0	
" 3. "	70	15	..	10 6	8 6	
Minerva Slip	700	40	..	12 6	10 6	J. S. White.
Falcon	380	40	..	14 0	8 0	
West:—						
Point Yard Slip						
No. 1	350	30	..	12 0	10 0	C. Hansen & Sons
Do. No. 2...	275	24	..	11 0	9 0	
Medina Dock & Patent Slip	331	56	16	12 0	9 6	J. S. White.
Slipway	300	40	17			W. White & Sons.
Marvins Slip	220	13	..	10 6	14 0	
No. 1	350	30	..	11 6	13 6 *	Inman & Co.
Do. No. 2 ..	430	32	..	top of	cradle.	
Patent Slip ...	250	25	..	20 0	17 0 †	
				top of	cradle.	
				13 0	11 0	

* Length of cradle, 100ft.

† Length of cradle, 70ft.

Charges.—Harbour dues: Under 50 tons $1/4$ vessel, exceeding 50 and under 100 $2/6$ vessel, over 100 $5/$ vessel. Ballast: in harbour $1/6$, in roads, $2/$ ton.

Pilotage.—See Portsmouth.

Officials.—Town Clerk (Newport), R. Roach Pittis; Harb. Master, W. H. Lawrence; Coll. of H.M. Cust., W. Dear.

CRAIL, Fifeshire. Lat. $56^{\circ} 16' N$; long. $2^{\circ} 37' W$. At N; entrance to Frith of Forth. THW. f. and c. 2h 20m. A lifeboat station.

CRAMOND, a creek of Leith, at the mouth of the Almond, D. HWST. 12ft, HWNT. 5ft.

CREETOWN, a sub-port of Dumfries.

CRINAN, at N. end of Crinan Canal, which extends from Ardrishaig to Crinan, 9 miles (see Ardrishaig). D. on sill of lock 9ft, length of lock 94ft by 24 wide. The distance from Ardrishaig to Crinan round the Mull of Cantire is upwards of 132 miles. Vessels to Glasgow using the canal save about 85 miles of exposed sea passage.

Official.—Superintendent, John Groves (see Ardrishaig).

CROIOH Harbour. North Uist, Hebrides. Lat. $57^{\circ} 37' N$; long. $7^{\circ} 35' W$. A well-sheltered harbour.

CROMARTY, Cromarty, Moray Frith, a small harbour having a depth of 14ft at HWST., and 9ft at HWNT. inside, and anchorage in 22ft ST., and 18ft NT. outside. Area, 70yds by 40yds; 2 wharves; crane 3 tons.

Harb. Auth.—Trustees.

Charges.—2d ton reg., ballast 1 3.

Official.—Harb. Master, W. Mackay.

CROMBIE POINT, N. side of Forth 2 miles from Charlestown. D. HWST. 12ft, HWNT. 8ft.

Charges.—Harb. dues, 2d per ton.

Official.—Harb. Master, T. Ford.

CROMER, Norfolk. Lat. $52^{\circ} 46' N$; long. $1^{\circ} 19' E$. A fishing town and lifeboat station.

CROOKHAVEN, Co. Cork. Lat. $51^{\circ} 30' N$; long. $9^{\circ} 40' W$. D. from 3 to 5 fms at LWST.

Official.—Chief Coast Officer, W. Wright.

CULLEN, Banffshire, Scotland. Moray Frith. Lat. $57^{\circ} 41' 30'' N$; long. $2^{\circ} 49' 30'' W$. **Auth.** Harbour Board. A small tidal harb. En. dry at LW. Used by vessels of 8 to 10ft draught. W. prev. N and NE. THW. f. and c. 12h 26m.

Charges.—Shipping per ton reg. 4d; light dues, $\frac{1}{4}d$; pilotage, $3\frac{1}{2}d$; ballast, 2d. Cartage by agreement. Laying out kedge, 5/.

Official.—Harb. Master, K. McDonald.

CULMORE, Lough Foyle, Ireland.

Charges.—Same as Londonderry.

CUMBWICH, a creek under Bridgwater. D. HWST. 19 to 24ft, HWNT. 14 to 17ft.

DALBEATTIE, Kirkcudbright, Scotland. Lat. $54^{\circ} 53' N$; long. $3^{\circ} 48' W$. No **Auth.**, but an agreement amongst shippers to tax themselves to support quay and its roads, in conjunction with the Dalbeattie Road Trustees. THW. f. and c. 11h 30m. W. prev. SW. **Accn.** Harb. dries at low water; 9ft at HWST, with 10 $\frac{1}{2}$ ft at the Low Quay, which is about 500yds below the harb. Large quantities of granite shipped by Messrs. D. H. & I. Newall.

Charges.—Harb. dues, merely nominal. Truckage, 5/ per horse. Tide work, 3/6 per tide.

Officials.—Clerk, Alex. Wilson; Harb. Master, Wm. Copeland.

Hotels.—“Donaldson’s,” “Tibbald’s.”

DARTMOUTH, Devon. Seaport. Lat. $50^{\circ} 20' 20'' N$; long. $3^{\circ} 33' 10'' W$. **Pop.** 5,725. **Auth.** Harbour Commissioners. P. NC. THW. f. and c. 6h 16m; Sp. rise 15ft; N. rise 10 $\frac{1}{2}$ ft. Ry. G.W. Tr.—I. Coal, salt, timber, fruit; E. Timber, coaling vessels, cider, &c. **Accn.** En. to harb.

220yds wide, opening into a safe and commodious harbour of considerable capacity for vessels of any dft. A pier with a depth of 20ft at LW.

Charges.—Harb. dues 3d reg. ton. for vessels discharging and ½d reg. ton. for windbound vessels, and ½d per reg. ton on vessels coaling.

Pilotage.—**District.** From Bob's Nose to the Start and *vice versa*. **Rates.** For ships boarded without the Run of the Mewstone East, or the Blackstone West, to Dartmouth (inwards), 10ft dft. and under, 2/6, 10ft to 12ft 3/, 12ft to 14ft 3/6, 14ft to 16ft 4/, 16ft and upwards 5/ per foot, (outwards) two-thirds of these rates; steamships putting into Dartmouth harb. for coal only pay for pilotage in and out, the rate above provided for inwards only. If boarded within the above-named line they pay one-half these rates; if boarded within the Castle they pay one-quarter these rates, subject to the circumstances of weather, &c. Ships boarded without the Run of Bob's Nose, or Berry Head, to Brixham or Torquay (inwards), 10ft dft. and under 1/6, 10ft to 12ft 2/, 12ft to 14ft 2/6, 14ft to 16ft 3/, 16ft and upwards 3/6 foot, (outwards) two-thirds of these rates; if boarded within the above-named line one-quarter part less; if boarded half a mile only from the outer piers, vessels of all sizes pay 1/foot dft. The pilotage to Tor Bay is not compulsory, but should the master of any vessel choose to employ a pilot, the charge is two-thirds less than for Brixham and Torquay; vessels bound to Teignmouth with a Teignmouth pilot on board, and piloted from Tor Bay to Bob's Nose by a Dartmouth pilot, pay 1d foot. Castle Line of steamers call fortnightly for mails and passengers. There are also two lines of steamers to W. Indies and S. America, and a German line to the Falkland Islands. Vessels of any tonnage coaled from hulks in centre of harb.

Towage.—In or out 2d reg. ton.

Officials.—Ry. Man. J. Davies; Harb. Master, W. C. S. Lewis; Coll. of H.M. Cust., W. L. Massy.

Hotels.—"Castle," "Royal Yacht," "Queen's," and "King's Arms," "Raleigh," &c.

DEAL, Kent. Lat. 51° 13' 30" N; long. 1° 24' 40" E. A maritime town of 9,050 inhabitants, and an increasingly popular seaside resort for summer visitors, situated between the N. and S. Forelands, opposite to and sheltered by the Goodwin Sands. An open beach with an iron pleasure pier. It is in contemplation to construct a harb. at this place, in front of land belonging to H. S. Chapman, Esq., for shelter to fishing vessels and for local trade. Sheltered from all but NE. and SE. winds. A lifeboat station. THW. f. and c. 11h 35m.

DERBYHAVEN.—See Isle of Man.

DEVONPORT.—See Plymouth.

DINGLE, Co. Kerry, Ireland. Lat. 52° 8' N; long. 10° 16' W.

About 20m SW. of Tralee. A tidal pier with 3 to 4ft at LW. **Auth.** Dingle Harbour Commissioners. **Tr.** Corn, coal, iron and earthenware. Vessels drawing 13ft can come alongside Pier at HW. ordinary tides. **D.** in anchorage, 3½ fathoms.

Anchorage. **D.** IIWST. 7 fathoms, HWNT. 6 fathoms.

Official.—Harb. Master, W. Collier.

DINGWALL, Ross-shire, Scotland. Frith of Cromarty. Ry. Highland and Sutherland. A fishing harb.

DONAGHADEE, Co. Down, Ireland. Lat. $54^{\circ} 38' 45''$ N; long. $5^{\circ} 32'$ W. 16 miles NE. of Belfast.

Ry. Belfast and Down. THW. f. and c. 11h 13m. Auth. Commissioners of Public Works in Ireland, under Act 1 Geo. IV., c. 113. Accn. Area about 16 acres at HW, and $6\frac{1}{2}$ at LW. D. at entrance LW. 12 to 12ft 9in, and inside from 2 to 11ft, with $11\frac{1}{2}$ ft additional at HWST. Used by vessels up to 200 tons. Cranes to 3 tons power. W. prev. SSW., most dangerous SSE.

Charges.—None.

Officials.—Sec., W. B. Soady, Esq., Dublin; Harb. Master, William Cruse.

Hotel.—"Arthur's."

DONEGAL, Co. Donegal, Ireland. Lat. $54^{\circ} 40'$; long. $8^{\circ} 7'$ W.

At the mouth of the Eask. THW. f. and c. 5h 18m. Auth. Quays belong to the Earl of Arran. Accn. Two quays with D. alongside of $7\frac{1}{2}$ to 11ft at HWST; Sp. rise 11ft and N. 8ft.

No Charges for quays.

Pilotage.—Doon Rock to Green Island $1/6$, Green Island to Quay 1/, out to sea $1/3$ per foot.

Officials.—Harb. Master, Alex. Kyle; Chief Coast Officer, R. Bell.

Hotels.—"Blain's" and "McGinty's."

DOUGLAS.—See Isle of Man.

DOVER, Kent. A seaport. Lat. $51^{\circ} 7'$ N; long. $1^{\circ} 18'$ E.

Pop. 30,270. Auth. Government Pier, Board of Trade; Harb. Dover Harb. Board, consisting of members appointed by the Admiralty, the Board of Trade. The S.E. and L.C. & D. Rys., and the Town. P. C. THW. f. and c. 11h 12m; Sp. rise $18\frac{3}{4}$ ft; N. rise 15ft. D. on bar at LT. is, ST. 18ft; N. 14ft. W. prev. SE. to SW.; most dangerous from SW. the L.C. & D. and SE. Tr.—I. Coal, timber, seed, &c.; E. Chalk, oil, oilcake, &c. LV. H.M.S. *Himalaya*. Accn. Tidal harb., 14 acres in extent, communicates with the Granville Floating Dock and the Wellington Dock. En. to tidal harb. is between two piers. W. of E. 140ft. Docks, &c. :—

Name.	Extent.	H. of T.		Width of Entrance.
		ST.	N.	
		ft.	ft.	ft.
Granville Dock	6 acres	22	...	69
Wellington	$11\frac{1}{2}$	15	...	70
Patent Slip	600 ft. x 60 ft. ...	21	17	...

Quayage space about 2,400ft. Extensive pier accn. Cranes to lift from 4 to 30 tons.

Charges.—Tonnage dues 3d ton, in ballast $1\frac{1}{2}$ d ton. Vessels using harb. tow-ropes pay 10/ per mast.

Pilotage.—See London District.

Towage.—Out of the harbour to the edge of the flood-tide, for vessels of 100 and under 200 tons £1; rising 5/ per 100 tons. If the steam is got up for a single vessel, a sum of £1 is charged over these rates. Vessels using the harbour tow-ropes 10/ mast.

Officials.—Registrar to Dover Harb. Board, J. Stilwell ; Harb. Master, J. Durden ; Man. L.C. & D. Ry., M. Harris ; Coll. of H.M. Cust., R. Henderson ; Lloyd's Agents, Hammond & Co.

Hotel.—"The Lord Warden."

DOWNS, THE. A roadstead on the SE. coast, between Ramsgate and Deal, the Goodwin Sands forming a breakwater, and affording a valuable refuge from all but NE. and SE. winds. It is proposed to construct a harb. of refuge at Deal, so as to give perfect security from all winds.

DROGHEDA, Louth. On the river Boyne, four miles from the sea. Lat. $53^{\circ} 43'$ N ; long. $6^{\circ} 18'$ W. Pop. 14,400. Auth. Port and Harbour Commissioners, under Act 5 Vict., c. 56. P. NC. THW. f. and c. 11h 45m ; Sp. rise $11\frac{1}{4}$ ft ; N. rise 9ft. D. on bar 6ft LWST. W. prev. SE. to W. They increase the height of the tides, but they do not form heavy seas ; the most dangerous are from SE. to NE. Ry. G.N. (I.) Tr.—I. Timber, grain, coals, slate, salt, iron, and general goods ; E. Cattle, horses, pigs, and agricultural goods. LV. Vessels of 17ft dft. have entered the river and arrived in their berths in the harb. on the same tide. Accn. The area of the harb. is 15 statute acres, with a quayage of 1,000yds in length on N. side, and 1,100ft on S. side (800ft lin. of which is not available to the public). Depth of water at quay Sp. 21ft ; N. 14ft ; medium 16ft. Good warehouse accn.

Charges.—Harb. dues, including deck cargo, 6d per reg. ton. Plankage 1/ each for discharge, 1/ each for ballasting or loading.

Pilotage.—District. From between Clogher Head and the Skerries to quays of Drogheda, and from quays to bay. Rates :—

Registered Tonnage.	No. 1. Vessels not having British Registers arriving from or sailing on a Foreign Voyage.			No. 2. Vessels with British Registers arriving from or sailing on a Foreign Voyage.			No. 3. Vessels, not Steamers, trading to or from a Port in the United Kingdom.		
	£	s.	d.	£	s.	d.	£	s.	d.
30 and under 40	0	12	0	0	9	0	0	6	0
40 " 50	0	15	0	0	11	3	0	7	6
50 " 60	0	18	0	0	13	6	0	9	0
60 " 70	1	1	0	0	15	9	0	10	6
70 " 80	1	4	0	0	18	0	0	12	0
80 " 90	1	7	0	1	0	3	0	13	6
90 " 100	1	10	0	1	2	6	0	15	0
100 " 110	1	13	0	1	4	9	0	16	6
110 " 120	1	16	0	1	7	0	0	18	0
120 " 130	1	19	0	1	9	3	0	19	6
130 " 140	2	2	0	1	11	6	1	1	0
140 " 150	2	5	0	1	13	9	1	2	6
150 " 160	2	8	0	1	16	0	1	4	0
160 " 175	2	11	0	1	18	3	1	5	6
175 " 200	2	14	0	2	0	6	1	7	0
200 " 225	2	17	0	2	2	9	1	8	6
225 " 250	3	0	0	2	5	0	1	10	0
250 " 275	3	3	0	2	7	3	1	11	6
275 " 300	3	6	0	2	9	6	1	13	0
300 " 325	3	9	0	2	11	9	1	14	6
325 " 350	3	12	0	2	14	0	1	16	0
350 " 375	3	15	0	2	16	3	1	17	6
375 " 400	3	18	0	2	18	6	1	19	0
400 and upwards	4	1	0	3	0	9	2	0	6

Towage.—Vessels from foreign parts including deck cargo ton 6d; vessels to foreign parts in ballast 5d. Coasting vessels with cargoes or limestone 4d; coasting vessels in clay ballast or light 3d reg. ton. **NOTE.**—Should vessels from foreign parts, or coasters, sail in without the aid of the Commissioners' tugboat, the former shall be charged 6d ton, and the latter 4d ton outward towage. Minimum charge for towage £1.

Officials.—Sec. to Commrs., J. McNamara; Harb. Master, Captain Leach; Coll. of H.M. Cust., G. Keith.

DRUMORE, Wigtownshire, Scotland. Near Mull of Galloway.

Auth. Owner, the Earl of Stair. **Accn.** Dry at half tide. **D.** at HWNT. 8ft, and at HWST. 12ft. **W.** prev. SE. to SW. **THW.** 11h 15m. Used principally by local boats and windbound vessels entering at HW.

Charges.—Loading 2d per ton, windbound 1d per ton.

Officials.—Agent, T. C. Greig, of Stanraer; Harb. Master, W. McMillan.

Hotels.—"Queen's Arms" and "Commercial."

DUBLIN, Dublin. On the river Liffey, 7m from the Irish Sea. Lat. 53° 21' N; long. 6° 16' W. **Pop.** 414,597. **Auth.** Port and Docks Board, under Act 30 Vict., c. 81. **P. NC.** **THW.** f. and c. at Dublin bar (Poolbeg lighthouse) 11h 12m; Sp. rise 12 to 14ft; N. rise 9 to 11ft. **D.** on bar at LWST. about 15ft, and at the following docks as under:—

Name.	S.T.	N.T.
	ft.	ft.
Custom House Dock	16 to 17	13½ to 14½
Spencer	14	11
Grand Canal	16	13
Inner Channel of Harbour at LW.	12 to 13	12 to 14

W. prev. **W.** are SW. to NW., and most dangerous are from ENE. to SE. **Rys.** G.N. (I.); G.S. & W.; L. & N.W.; M.; G.W.; D.W. & W. **Tr.** (chiefly cross Channel)—I. Sugar, grain, ice, timber, merchandise, manure, &c.; E. Grain, manure, whisky, beer and porter, linen, merchandise, &c. Largest sailing vessel at HW. was *Donald McKay*, 2,500 reg. ton. 24ft dft. This vessel discharged her cargo of 3,000 tons guano at the new works direct on the quay. The largest vessels that come up at LW are steamers of 400 to 480 tons of 13½ft dft. The *Great Eastern* lay alongside Northern Quays for a winter. The **En.** to the harb. between the North Bull and Poolbeg lighthouses is 1,000ft wide, and is formed by the channel of the Liffey, which is quayed on both sides through the city. The area available for shipping extends from the entrance of Alexandra Basin to Butt Bridge, and, inclusive of the Alexandra Basin, the Custom House, and the Royal and Grand Canal Docks, it is 205 acres in extent. The Alexandra Basin contains 50 acres of water, having a depth of 24ft at LW. over three-fourths of its area, and 2,355 lin. ft of quay wall, on the S. and W. sides, with 24ft in line of keel at LW. The Grand Canal Docks, on the S. side of the harb., have an acreage of 25 acres, and about 2,000 yards of quayage. George's Dock (inner) is 650ft long by 300ft wide, and (outer) 320ft by 250ft wide; W. of E. 36ft. The Spencer Dock (belonging to the Midland Ry. Co. of Ireland has about one mile of quayage, is 26ft wide at entrance, and

has 5ft on sill at LW. The Custom House Old Dock is 413ft long by 210ft wide; W. of E. 35ft. The river, or harb. channel, is about 7,633 yards long, varying in width from 80 to 334 yards, with a depth at LWST. of 13ft. There are timber jetties, 3,925ft in length, outside some of the old quay walls, along both sides of the river, so as to permit the berths to be deepened to 5 to 8ft in line of keel at LW. At the S. side of the river there are 4,078 lin. ft of deep-water quays, with 19 to 22ft in line of keel at LW. On the N. side of the river there are 3,572 lin. ft of deep-water quays, with 8 to 16ft in line of keel at LW. The N. quay also extends eastward 2,142ft, with 22ft in line of keel at LW. There is a length of 3,352ft of sheds, chiefly in connection with the cross Channel trade, and tramways to an aggregate length of 14,498ft on the quays, connecting these with various railways.

Graving Docks, &c. :—

Name.	Length.	Width of Entrance.	Depth on Sill at OHW.	Owner.
	ft.	ft. in.	ft. in.	
North Wall Graving Dk.	408	70 0	16 0	} Port and Docks Board.
No. 1 Patent Slip.*	75	30 0	6 6	
No. 2 Do. †	155	36 0	8 6	
Dry Dock No. 1	280	35 0	12 3	
Do. 2	165	35 0	12 3	
Do. 3	80	22 0	11 9	

* For vessels of 200 reg. tons. † For vessels of 500 reg. tons.

Charges.—Harb. dues 10½d ton; coastwise 6½d. Tonnage duty 5½d ton on timber and stone. All other goods free. Corporation dues 5/6 each vessel with goods; 13/4½ with coals. Plankage, 2/6 each plank for loading or unloading. Various dock dues on ships and goods.

Pilotage.—District. On the north an imaginary straight line drawn from a point between Balbriggan and Skerries, and through Rock-a-bill Lighthouse to a point at sea three leagues distant from the nearest land on that part of the Irish coast. On the south an imaginary straight line drawn from a point in the same latitude as the South Arklow Lightship, and through the lightship on the south end of the Arklow Bank, and thence to a point at sea three leagues distant from the nearest land on that part of the Irish coast. On the east by an imaginary line drawn from the seaward extremity of the northern boundary line of a point at sea three leagues eastward of the Nose of Howth, thence to a point at sea three leagues eastward of Wicklow Head, and thence until it joins the seaward extremity of the southern boundary line. **DIVISIONS OF DUBLIN PILOTAGE DISTRICT.** No. 1.—*Inner Pilotage Division.* The Inner Pilotage Division comprises the area which would be enclosed by straight lines drawn from Bray Head to the buoy on the south end of the Kish Bank, and from thence to the Kish Lightship outside the Kish Bank, and from thence on to Ireland's Eye, except so much of that area as is comprised in the Bay Pilotage Division. No. 2.—*Bay Pilotage Division.* The Bay Pilotage Division comprises the whole area of Dublin Bay outside the bar, and is formed by an imaginary straight line drawn from the north headland of Dublin Bay called Howth Bailey, to the south headland of Dublin Bay, called the Land's End of Dalkey. No. 3.—*Outer Pilotage Division.* The Outer Pilotage Division comprises the area which would be enclosed on the north by the northern boundary line of

the Dublin Pilotage District, on the east by the eastern boundary line, on the south by the southern boundary line, and on the west by the lines forming the boundary to seaward of the Inner Pilotage Division. **Rates.** *Inner Pilotage District.* British or foreign vessels from or to foreign ports to the quays or docks of Dublin 3/ foot ; into Kingstown, Dalkey Bullock, or Sutton 2/ foot ; to the quays or docks of Dublin from Kingstown, Dalkey Bullock, or Sutton 2/6 foot ; from the bar to the quays or docks of Dublin 1/ foot. For piloting (not in ballast) outwards, to any part of this division, from the quays or docks of Dublin to Poolbeg 1/ foot ; from Poolbeg over the bar 1/ foot ; from Kingstown, Dalkey Bullock, or Sutton 2/ foot. Colliers or coasters, to the quays or docks of Dublin 1/6 foot ; into Kingstown, Dalkey Bullock, or Sutton 1/ foot ; to the quays or docks of Dublin from Kingstown, Dalkey Bullock, or Sutton 1/6 foot ; from the bar to the quays or docks of Dublin 6d foot. For piloting (not in ballast) outwards, or to any other part of this division, from the quays or docks of Dublin to Poolbeg 1/ foot ; from Poolbeg over the bar 1/ foot ; from Kingstown, Dalkey Bullock, or Sutton 1/ foot. British or foreign vessels from or to foreign ports, and colliers or coasters, in ballast, from the quays or docks of Dublin to Poolbeg 1/ foot ; from Poolbeg over the bar 1. foot. *Bay Pilotage Division.* British or foreign vessels from or to foreign ports, to the quays or docks of Dublin 2/6 foot ; all other charges identical with the rates of pilotage of the Inner Pilotage Division. *Outer Pilotage Division.* British or foreign vessels from or to foreign ports, to the quays or docks of Dublin 4/ foot ; into Kingstown, Dalkey Bullock, or Sutton 3/ foot ; from the quays or docks of Dublin 2/ foot ; from Kingstown, Dalkey Bullock, or Sutton 2/ foot. Colliers or coasters, to the quays or docks of Dublin 2/6 foot ; into Kingstown, Dalkey Bullock, or Sutton 2/ foot. The rates in the several divisions are charged for every foot of water the vessel draws, and in proportion for every half-foot. A fractional part of a foot less than half a foot is in all cases reckoned half a foot.

Towage.—From bay to quays, foreign 6d ton ; coasting 2d ton.

Officials.—Sec. to Port and Docks Board, N. Proud ; Harb. Master, Capt. George Graves ; Asst. Harb. Master, Capt. W. F. Hartford ; Custom House Dock Master, Capt. F. Gill ; Pilot Supt., Capt. D. Dunn ; Spencer Dock Master, W. Brunton ; Sec. Grand Canal Co., W. D. Cooke ; Coll. of Cust. and Rec. of Wrecks. F. G. Walpole ; Lloyd's Agent, G. Bell ; Lloyd's Surv, L. Franklin ; Man. G.S. & W. Ry., R. S. Colhoun ; Man. M.G.W. Ry, J. E. Ward ; Man. (Ireland) L & N.W. Ry., W. G. Skipworth.

DUDDON RIVER, Cumberland. Lat. 54° 12' N ; long. 3° 17' W. THW. 11h 38m. Auth. The Hodbarrow Mining Co., Ltd., of Millon. D. on bar LW. 3ft, and 30ft at HW. W. prev. S. and SW. ; most dangerous on bar SW., but wharf is protected by Hodbarrow Point. Crane power to 3 tons.

Charges.—Anchorage, to Lord of Manor, 4d per vessel ; water rate 6d per vessel.

Official.—Harb. Master, Capt. Morgan.

DUMBARTON, Dumbartonshire, Scotland, River Clyde. Ry. N.B. Auth. Harb. Board under Act 1881.

THW. f. and c. oh 20m. **Accn. D.** on bar 8ft at **LW.** and 18ft at **IIWST.** Area. Tidal river about 1 mile long by 300ft wide constitutes the harb. There is 1 dry dock and 2 tidal docks, all belonging to private firms. Harb. is used by vessels of up to 1,800 tons, but principally for shipbuilding, vessels of 5,000 being built.

Charges.—**Rates** on vessels entering, using or passing through the harb. of Dumbarton :

For every vessel of 100 tons (with the exceptions under specified per ton)														
and under 200 tons						...	...	...per ton	o	2	
"	"	200	"	"	500	"	...	...	...	o	7
"	"	500	"	"	1,000	"	...	...	...	o	9
"	"	1,000	"	"	1,500	"	...	...	...	o	11
"	"	1,500	"	"	2,000	"	...	...	...	1	1
"	"	2,000	"	"	2,500	"	...	...	...	1	3
"	"	2,500	"	"	3,000	"	...	...	...	1	8
"	"	3,000	"	"	3,500	"	...	...	...	1	7
"	"	3,500	"	"	4,000	"	...	...	...	1	9
"	"	4,000	"	"	4,500	"	...	...	...	2	3
"	"	4,500	"	"	5,000	"	...	...	...	2	9
"	"	5,000	and upwards			...	...	...	...	3	0
For repairs under 2,000										"	o	2		
of 2,000 tons and upwards										o	6

All Vessels to be charged according to net register tonnage.

Pilotage.—Nil. (See Clyde dues (Glasgow) for pilotage charged by them on vessels coming into Dumbarton.)

Officials.—Harb. Mast., W. Brown ; Supt., Donald Cameron.

Hotels.—"Elephant" Hotel and "Lennox" Temperance Hotel.

DUMFRIES, Dumfriesshire. On the river Nith, 10 miles from Solway Firth. Lat. 55° 1' N ; long. 3° 35' W. Pop. 17,090. Auth. River Nith Commissioners. **THW.** noon ; Sp. rise 6ft. **D.** at Dumfries, ST. 8ft ; NT. 0ft. Kingholm (1 mile seawards) ST. 10ft ; NT. 2ft. Glencaple (5 miles seawards) ST. 15ft. ; NT. 7ft. Carsethorn (mouth of the river) ST. 18ft ; NT. 10ft. **Rys.** Cal., G. & S.W. **Tr.**—I. General merchandise ; E. Potatoes, seeds, and timber. The harb. is formed by the river Nith, and is about 4½ miles long. There are 1,014yds of wharfage provided by the various quays. Patent slip at Pohend, near Palnackie, taking vessels of 200 tons.

Charges.—Harb. dues, general merchandise 10d ton ; coals and lime 2d ton. Coaling vessels 2d reg. ton. Foreign 6d ton.

Pilotage.—District not defined. Rates to or from sea 3/ foot.

Towage.—There are no steam tugs belonging to the port ; vessels requiring towage make special agreement with owners of tugs at Maryport or Silloth.

Officials.—Harb. Master, G. Little ; Clerk to Commrs. and Coll. of Harb. dues, James Carmont.

DUNBAR, Haddingtonshire. Lat. 56° 0' N ; long. 2° 30' 40" W. Frith of Forth. Auth. Town Coun. under Act 11 and 12 Vict. c. 122. **Ry.** N.B. A lifeboat station. Difficult of access, but secure to shipping when in. **THW.** f. and c. 2h 8m. Dry at **LW.** Victoria Harbour. **D.** HWST. 18ft, HWNT. 14ft. Wharfage, about 600ft. Old Harbour, HWST 12ft, HWNT 9ft 6in.

Charges.—To or from foreign ports 4d per ton reg. ; coasters 3d

Official.—Harb. Master, W. Smith.

DUNBEATH, Caithness, a sub-port of Wick. A fishing port.
D. HWST. 9½ft, HWNT. 6ft.

Official.—Pilot, James Sinclair.

DUNCANNON, Wexford, near Waterford. On the Suir.
Lat. 52° 13' 13" N; long. 6° 15' W. Stone
piers belonging to the Government. James II. embarked here for
France after the battle of the Boyne.

DUNDALK. On Castletown River, county Louth, Ireland.
Lat. 55° 38' 40" N; long. 6° 15' W. Pop.
12,000. Auth. Harbour Commissioners under Act 1885. P.
C. for sail; NC. for steam. THW. f. and c. 10h 56m; Sp.
rise 15ft; N. rise 11½ft. D. on bar 3 to 4ft OST. W. prev.
W. and SW.; most dangerous SE. Rys. G.N. (I.), and D.N.
& G. Tr.—I. Coals, iron, corn, bricks, slates, &c.; E. Cattle,
butter, grain, ale, timber, &c. LV. a steamship of 800 reg.
ton. No vessels enter the harb. at LWST. Accn. The chan-
nel at the town is about 300ft wide, and vessels lie alongside
the quays partly waterbound; the length of channel in the inner
harb. is about 9,000ft. There are numerous quays on the S. side of
the channel, viz., George's, Brown's, Martin's, Duffy's, and William-
son's. There is a patent slipway 400ft long × 40ft wide; R. of T.
ST. 15½ft; NT. 9ft; and good warehouse accn. Crane power up
to 15 tons.

Charges.—Mooring buoys 50% off published rates.

Pilotage.—District. For inward pilots. From an imaginary
line drawn straight from seaward end of Dunany Point to sea-
ward end of Cooley Point, to Dundalk quays. For outward pilots.
Quay to bar or lighthouse. Rates:—

Registered Tonnage.	No. 1. Vessels with British Registers Arriving from or Sailing on a Foreign Voyage.			No. 2. Sailing Vessels, Trading to or from a Port in the United Kingdom.		
	£	s.	d.	£	s.	d.
30 and under 40 tons	0 9 0	0 6 0		
40 " 50 "	0 11 3	0 7 6		
50 " 60 "	0 13 6	0 7 6		
60 " 70 "	0 15 9	0 9 0		
70 " 80 "	0 18 0	0 12 0		
80 " 90 "	1 0 3	0 13 6		
90 " 100 "	1 2 6	0 15 0		
100 " 110 "	1 4 9	0 16 6		
110 " 120 "	1 7 0	0 18 0		
120 " 130 "	1 9 3	0 19 6		
130 " 140 "	1 11 6	1 1 0		
140 " 150 "	1 13 9	1 2 6		
150 " 160 "	1 16 0	1 4 0		
160 " 175 "	1 18 3	1 5 6		
175 " 200 "	2 0 6	1 7 0		
200 " 225 "	2 2 9	1 8 6		
225 " 250 "	2 5 0	1 10 0		
250 " 275 "	2 7 3	1 11 6		
275 " 300 "	2 9 6	1 13 0		
300 " 325 "	2 11 9	1 14 6		
325 " 350 "	2 14 0	1 16 0		
350 " 375 "	2 16 3	1 17 6		
375 " 400 "	2 18 6	1 19 0		
400 and upwards	3 0 0	2 0 6		

Ballast pilotage on coasting vessels outwards :—

							£	s.	d.
30 and under 60 tons	...	...	...	...	...	...	0	5	0
60 " 80 "	...	...	...	...	...	...	0	7	6
80 " 100 "	...	...	...	...	...	...	0	10	0
100 " 120 "	...	...	...	...	...	...	0	12	6
120 " 130 "	...	...	...	...	...	...	0	16	6
130 " 140 "	...	...	...	...	...	...	0	17	6
140 " 150 "	...	...	...	...	...	...	0	19	0
150 " 160 "	...	...	...	...	...	...	1	1	0
160 " 170 "	...	...	...	...	...	...	1	2	0
170 " 180 "	...	...	...	...	...	...	1	3	0
180 " 190 "	...	...	...	...	...	...	1	4	0
190 " 200 "	...	...	...	...	...	...	1	5	0
200 " 250 "	...	...	...	...	...	...	1	6	0
250 " 300 "	...	...	...	...	...	...	1	7	0
300 and upwards	...	...	...	...	...	...	1	10	0

Vessels arriving with a cargo from a foreign voyage and leaving in ballast pay two-thirds of inward pilotage.

Towage.—Coasters 4d ton ; Foreign 6d ton.

Officials.—Sec. to Harb. Commrs., J. F. Farrell ; Harb. Master, A. Hughes ; Coll. of H.M. Cust., T. Ploughman.

Hotels.—"Queen's Arms" and "Imperial."

DUNDEE, Forfar. On the Firth of Tay, 10 miles from the North Sea. Lat. 56° 28' N. ; long. 2° 58' W. Pop. 155,000. Auth. Harbour Trust, under Act 1875. P. C. THW. f. and c. 2h 32m ; Sp. rise 14½ft ; N. rise 11½ft ; R. of N. 8½ft. D. on bar is 17ft below LWOST. Vessels drawing less water usually take the bar in ordinary weather at any state of tide ; larger vessels have to wait for sufficient water. W. prev. W. and SW. There are no dangerous winds at the harb. On the bar of the river the most dangerous wind is E. Rys. Cal. and N.B. Tr. —I. Timber, iron, flax, hemp, jute, lime, guano, esparto grass, grain, flour, coals, blubber, &c. ; E. Linen, sailcloth, sacking, grain, timber, paper, yarns, coals, &c. LV. which have arrived during the past 10 years (previous to that time vessels coming to this harb. were of a smaller class), sailing vessels :—*Cuba*, 2,500 tons ; *Lancing*, 2,599 tons ; *Liverpool*, 3,330 tons ; *Alice A. Leigh*, 2,928 tons ; and of steamers, *Knight Companion*, 2,542 tons ; *Arara*, 2,601 tons ; *Indramays*, 2,661 tons ; *Knight Templar*, 2,704 tons, drawing from 21 to 24ft of water. Several large steamers have been built at, and sailed from the port, amongst them being the steamship *Merton Hall*, 2,646 net reg. tons., which was built at Dundee, and sailed with coals, drawing 24ft 10in. She loaded up in the Roads. The present harb. Accn. (outside the docks) is 4½ acres in the West Tidal Harb., that is at the entrance to the W. or older docks, and about three-quarters of an acre in the East Tidal Harb., that is, at the entrance to the E. or newer docks. A deep water loading wharf has been recently erected, where vessels partially discharge ; this wharf and its commodious sheds is in process of being extended. A landing place for foreign animals, not subject to slaughter or quarantine, consisting of wharf, with lairage sheds capable of accommodating from 600 to 800 head of cattle, and ample space for further extension ; also sale ring and loading bank for convenience by railway has been erected. The first cargo was loaded in the last week of August, 1890. The depth

alongside is 19ft at LW. The docks, with areas and depths over the sills, are as follows :—

Name.	Area.	Width of Entrance.	Depth.	
			LWO. ST.	HWO. ST.
	acres	ft.	ft. in.	ft. in.
Oldest Dock, King William the Fourth	6½	39	...	14 6
Second do. Earl Grey	5½	55	2 6	17 0
Camperdown Dock	8½	60	7 0	21 6
Victoria Dock.....	11	60	7 0	21 6

Graving Docks, &c. —

Name.	Length.	Width.	Depth of Sill OHW.
	ft.	ft.	ft.
East Graving Dock	513	53	20
Patent Slip	500	44	...
West Graving Dock	287	38½	13½

There is one large warehouse ; also steam hydraulic and hand cranes up to 70 tons, and hyd. jiggers for unloading jute. The present area of accommodation within the docks for ships and boats is 31 acres.

Charges.—Tonnage rates, foreign 4d to 1¼ reg. ton. ; coasting, 2d to 3d ton ; river 1d and 1½d reg. ton., and 1/ and 2/ voyage. Miscellaneous rates. Rates on goods. Lighting and buoying rates 1½d on all vessels entering or leaving the harb.

Pilotage.—District. The limits within which vessels can be piloted by the pilots licensed by the Trustees, are from six miles outside of the Fairway buoy at the entrance to the river Tay, up the river as far as Invergowrie on the north, and Balmerinloch on the south side of the Tay. **Rates.**—*Foreign.*—I. Inwards : for vessels from foreign boarded not more than 3 miles outward of the Fairway buoy, or at any point between that distance and the said buoy, and from thence to and including any point or place within the docks of Dundee or Broughty Ferry and Tayport harbs., 3/10½ per foot, according to the draught of water. Outwards : for vessels to foreign, boarded at any point or place within the docks of Dundee or Broughty Ferry and Tayport harbs., and discharged at the buoy of Tay 3/10½ per foot. II. Inwards : for vessels from foreign, boarded as above, and discharged in the roads 2/5½ per foot. Outwards : for vessels to foreign, boarded in the roads and discharged at the buoy of Tay per 2/5½ per foot. III. Inwards : for vessels from foreign, boarded above Broughty Castle, to and including the docks of Dundee or Broughty Ferry and Tayport harbs. 1/4½ per foot. Outwards : for vessels to foreign, boarded in the docks or Broughty Ferry and Tayport harbs. and discharged in the roads 1/4½ per foot. *Coasting.*—IV. Inwards and outwards : for vessels coasting, boarded and discharged as in No. I. 2/9 per foot. V. Inwards and outwards : for vessels coasting, boarded and discharged as in No. II. 2/2½ per foot. VI. Inwards and outwards : for vessels coasting, boarded and discharged as in No. III. 1/1½ per foot. Vessels boarded at Tayport and discharged in the docks at Dundee, or boarded in the docks at Dundee, and discharged at Tayport, are charged 1/5½ per foot. During the months of Oct., Nov., Dec., Jan., Feb., and March in each

year, the rates are as follows :—I. $4/51^{2\frac{1}{2}}$; II. $3/11^{2\frac{1}{2}}$; III. $1/4\frac{1}{2}$; IV. $3/31^0$; V. $2/9$; VI. $1/11^0$. In addition to the above rates $\frac{1}{4}$ d per ton is chargeable on the excess tonnage of all vessels above 500 tons reg. In the event of vessels having to stop in Carolina roads for want of water in the docks at Dundee, or otherwise, the pilot shall be entitled to leave the vessel; but if the master of the vessel desire to retain him on board till she can enter the harb., he shall intimate such desire to the pilotmaster, who will decide whether that can be done. In the former case, full pilotage rates shall be exigible, but another pilot will, when required, be appointed to bring the vessel into the harb. without any charge beyond the ordinary pilotage rates; in the latter, besides these rates, ten shillings shall be payable for each day or part of a day any pilot shall be so detained, in name of river fees; and in the case of outward bound vessels requiring similar service, the charge for river fees shall be the same. All vessels inward bound, boarded beyond the distance of three miles from the buoy of Tay, and not exceeding six miles, to pay ten shillings and sixpence additional for distance money; and vessels boarded six miles beyond the said buoy of Tay to pay fifteen shillings of distance money. In case of dispute the distance shall be ascertained by the bearings of the different headlands when the vessel was boarded.

Towage.—Minimum charge for sea towage £2 10/, and for harb. towage 20/. **Rates Inwards** including docking (with second tug if necessary): Outside No. 3 Black Buoy, and under 6 miles outside Fairway Buoy 4d reg. ton. From No. 3 Black Buoy and below Newcome Buoy 2d reg. ton. From Newcome Buoy or inwards, under weigh or at anchor $1\frac{1}{2}$ d reg. ton. When two tugs are required for docking a vessel, the second tug shall receive out of the above rates one third the total charge for towage from Newcome Buoy. When more than two tugs are necessary, the charge shall be as above for the first two tugs, and the rest shall be paid by the vessel, each one-third towage rates from Newcome Buoy. **Rate Inwards** (by two or more tugs, including docking with same) first tug 3d; each additional tug 2d reg. ton. All tugs to be paid by vessel. **Outward Rates.** For loaded vessels, half of inward rates. For vessels in ballast, one-third of inward rates. **Towage to Tayport** not ex. 150 tons £1 10s; ex. 150 and not ex. 200 tons £1 5s; ex. 200 and not ex. 300 £1 10s.; ex. 300 tons £2. **Shifting docks**, not ex. 200 tons £1; ex. 200 and not ex. 300 tons £1; ex. 300 and not ex. 400 tons £2; ex. 400 and not ex. 600 tons £2 10s; ex. 600 and not ex. 800 tons £3; ex. 800 and not ex. 1,000 tons £3 10s.; ex. 1,000 £4. **Attending launches**, same rates as shifting docks. **Rate for hawsers**, not ex. 500 tons, river £1, sea £1 10s.; ex. 500 and not ex. 1,000 tons, river £1 10s, sea £2; ex. 1,000, river £2, sea £2 10.

Officials.—Sec. to Harb. Trust., A. E. Gray; Harb. Master, Capt. C. Yule; Treas., J. Watson; Engineer, D. Cunningham; Coll. and Surv. H.M. Cust., F. S. Tulputt; Lloyd's Surv., J. Rae.

DUNFANAGHY, Co. Donegal. Lat. $55^{\circ} 10'$ N; long. 8° W. Quay dries at LW. Used by vessels drawing 8ft.

DUNGARVAN, Co. Waterford. Lat. $52^{\circ} 4' 27''$ N; long. $7^{\circ} 35'$ W. THW. f. and c. 5h 12m. D. HWST. 16ft, HWNT. 10ft.

Charges.—Pilotage, 10/ to 20/ as agreed. Plankage, 2/. Harb. dues, 2d per ton; wind-bound, 1d. Ballast, 1/ per ton f.o.b.

Official.—Harb. Master, P. Curran.

DUNMANUS HARBOUR, Co. Cork. Lat. $51^{\circ} 30' N$; long. $9^{\circ} 50' W$. D. 13ft in centre of harb., but a dangerous place, and only suited for hookers.

DUNMORE (East Harbour). Lat. $52^{\circ} 9' N$; $6^{\circ} 59' W$. W. side of entrance to river Suir.

THW. f. and c. 5h 29m. D. inside pier head 8 to 14ft. The pier affords a secure anchorage with westerly gales, as well as from the prodigious sea which rolls along the southern coast, but is not adapted for an asylum harb. from its spaces being confined and its want of depth, there being only one spot within the pier-head with more than 12ft, 8 to 10ft being the ordinary depth at low water. A good anchorage in the roadstead in 14 to 16ft LW., secure from all but southerly winds. **HW.** f. and c. 5h 29m. Sp. rise $12\frac{1}{2}$ ft; Np. 10ft; Np. ranges $7\frac{1}{2}$ ft. Limits of harb. from Shannoon Point to Ardnamult Point about 2,000 ft; from pier-head to Ardnamult about 1,275ft. Quayage 820ft of deep water quays and 300ft of quays. Dry at LW. Waterford Harb. Commissioners pilot cutter stationed here; rate of pilotage to Dunmore $1\frac{1}{2}$ d per ton on reg. Lifeboat and rocket apparatus stations. Auth. Commissioners of Public Works in Ireland, under Act 58 Geo. III. chap. 72.

Charges.—Dues on vessels mooring inside pier-head 2d per ton on reg. and 3d per ton on coal, salt, lime, stone, &c., with special charges on cattle and other goods landed or shipped.

Officials.—Sec. to Commissioners of Public Works, Dublin, W. B. Soady, Esq.; Harb. Mast., T. Dunn; Pilot Mast., Capt. Kennedy, of Passage East.

Hotels.—"Walsh's," "Dunmore," "Harvey's," and "Galzey's."

DUNURE, Ayrshire. Lat. $55^{\circ} 25' N$; long. $4^{\circ} 46' W$. Two dilapidated piers dry at LW. D. 6ft. at HW.

THW. f. and c. 11h 48m.

DUNVEGAN, Isle of Skye, Hebrides. Lat. $57^{\circ} 28' N$; long. $6^{\circ} 32' W$. A sheltered but not commodious harb. **THW.** f. and c. 6h 7m.

DYSART, Fifeshire. N. side of Frith of Forth. Lat. $56^{\circ} 7' 15'' N$; long. $3^{\circ} 7' 15'' W$. Ry. N.B. **THW.** f. and c. 2h 30m. Auth. Town Council. Accn. En. to harb. 60ft wide. D. 10ft at HWNT., and 14ft HWST. Dry at LW. Dock 200ft by 180ft, with quayage 600ft. En. 37ft wide. Used by vessels up to 200 tons. There are three shoots for shipping coals and a slipway 29ft wide.

Pilotage.—1/ per foot.

Charges.—Dock charges 3d per ton on vessels to or from foreign ports, and 3d per ton on coasters; harb. dues $1\frac{1}{2}$ d per ton.

Officials.—Provost, Andrew Terrace; Harb. Master, John Harraw; Collector of Customs, Jas. Urquhart.

Hotel.—"Royal Townhead."

EARNMOUTH, a creek of Perth. D. HWST. 14ft, HWNT. 10ft.

EASEDALE, I. of Jura, Hebrides. A small harb. for vessels engaged in the slate trade.

EASTBOURNE, Sussex. An open beach and fashionable watering place.

EDAY, Orkney Islands. Lat. $59^{\circ} 10' N$; long. $3^{\circ} 5' W$.

EDEN WATER.—See Guardsbridge.

EDINBORO'.—See Leith.

ELGIN.—See Lossiemouth.

ELIE, Fifehire. Lat. $56^{\circ} 11' N$; long. $2^{\circ} 50' W$. A small tidal harb. protected by a sea wall, and a pier 845ft in length. D. HWST. 15ft HWNT. 10ft THW. at f. and c. 1h 59m. Auth. Owner, W. Baird, Esq., of Elie, under provisions of statute 20 and 21 Vict., 1857.

Charges.—Dues of vessels under 15 tons $1\frac{1}{2}d$. per ton, under 50 tons $2\frac{1}{2}d$, under 100 tons $3d$, over 150 tons $3\frac{1}{2}d$. Vessels windbound half the above.

Pilotage.— $2\frac{1}{2}d$ per ton reg.

Official.—Harb. Master, W. Macintosh.

ELLEN PORT, Islay, Hebrides. Lat. $55^{\circ} 37' 10'' N$; long. $6^{\circ} 12' 40'' W$. There is an anchorage in $3\frac{1}{2}$ fms.; entrance through rocks.

ELLESMERE PORT, River Mersey. Used by vessels of 100 to 300 tons entering at HW., and by tugs and barges belonging to the Shropshire Union Railways and Canal Co. Auth. Shropshire Union Railway and Canal Co., under their Act of Parliament. THW. f. and c. 12 o'clock. D. at HW. 10 to 22ft. Area 5 acres. LV. 500 tons. Cranes: 32 hydraulic and 31 hand cranes of various powers up to 10 tons.

Officials.—S. Reay, Sec. L. & N. W., Euston Station, London. Harb. Master, J. Platt. Manager, T. Hales, Chester.

Hotels.—The "Dock," "Bull's Head," and "Railway."

ELY, Glamorganshire.—See Penarth.

EMSWORTH, Portsmouth. D. HWS. 15ft, HWN. 9ft.

Official.—Harb. Master, H. Miller.

There is a small slipway.

ERIN-PORT.—See Isle of Man.

ERISKA PORT, I. of South Uist. Lat. $57^{\circ} 5' N$; long. $7^{\circ} 15' W$. Situated in a loch of the same name. A good harb. for small vessels. THW. at f. and c. 2h 0m.

ESSIE, Banffshire.—See Port Essie.

EXETER, Devonshire. On the Exe. Nine miles from the sea. Lat. $50^{\circ} 40' N$; long. $3^{\circ} 27' W$. Pop. 47,150. Auth. Mayor, aldermen, and citizens. P. NC. THW. at Exmouth 6h 21m; Sp. rise $12\frac{1}{2}ft$; N. rise $8\frac{1}{2}ft$. D. Exmouth Bar and Bight, ST. 20ft, NT. 14ft; Topsham Quay, ST. 12ft, NT. 8ft; Turf, ST. 14ft, NT. 10ft; Exeter Bar, ST. 13ft; Basin, ST. 18ft; Town Quay, ST. 10ft. Rys. G.W. and L. & S.W. Tr.—I. General; E. Ground barytes, timber, &c. LV. Vessels of 400 tons can reach the city of Exeter, where there is a large floating basin connected with Exmouth by a canal five miles long, 13ft deep, and 30ft wide. Vessels must lighten to 12ft before entering canal. Cranes to lift 20 tons.

Charges.—Harb. dues $1/2$ vessel. Canal dues $1/$ reg. ton; $3d$. reg. ton in addition for horse trackage. Buoyage and town dues, ballast, $1/-$ per ton f.o.b.

Pilotage.—District. From Lyme to Bob's Nose, and *vice versa*.
Rates. Coasters. —For ships in and over Exmouth Bar, to the moorings in the Bight at Exmouth, and out again over the bar.

Inwards :—				s. d.						s. d.
Not ex. 60 reg. tons.....	1	9	foot dft.			Ex. 150 and not ex. 175 tons	4	3	foot dft.	
Ex. 60 and not ex. 80 tons	2	0	"			" 175 "	200	"	4	9
" 80 "	90	"	2	3	"	" 200 "	250	"	6	0
" 90 "	100	"	2	9	"	" 250 "	300	"	7	0
" 100 "	125	"	3	3	"	" 300 "	400	"	7	9
" 125 "	150	"	3	9	"					

Ships from foreign parts. For ships in and over Exmouth Bar, to the moorings in the Bight at Exmouth, and out again over the bar. Inwards :—

				s. d.						s. d.
Not ex. 80 reg. tons.....	3	0	foot dft.			Ex. 200 and not ex. 250 tons	6	3	foot dft.	
Ex. 80 and not ex. 100 tons	3	9	"			" 250 "	300	"	7	9
" 100 "	150	"	5	0	"	" 300 "	400	"	9	0
" 150 "	200	"	5	6	"	" 400 "			9	9

And 1¹/₂ foot for every 100 tons additional.

Outwards, one-half these rates. All ships carried up from the Bight at Exmouth to the Sands 3¹/₆; back 3¹/₆. All ships under 100 tons, carried up to Topsham Quay 13/; back 13/. All ships under 100 tons carried up to Turf 9/; back 9/. All ships upwards of 100 tons carried up to Topsham Quay ton 1¹/₂d; back 1¹/₂d. All ships upwards of 100 tons carried up to Turf, ton 1¹/₂d; back 1¹/₂d.

Towage.—Sea to Bight 3¹/₂d, out 3d, return 6d; sea to Turf 4¹/₂d, cut 4d, return 7¹/₂d; sea to Topsham 5d, out 4¹/₂d, return 8¹/₂d; Bight to Turf 3d, out 2¹/₂d, return 5d; Bight to Topsham 4d, out 3¹/₂d, return 7d.

Officials.—Clerk, G. R. Shorto; Harb. Master and Wharfinger at Exeter, A. Clements; Harb. Master at Exmouth, S. E. Bowden.

Hotels. — "Rougemont," "London," "Clarence," "Half Moon," "White Lion," "Globe," and "Queen's."

EXMOUTH (see Exeter), Devon. A lifeboat station. Docks for fishing boats up to 80 tons. **Auth.** Dock Co., under Exmouth Docks Act, 1864. **W.** prev. **W.** most dangerous SE. or WSW. **THW.** f. and c. 6h 2m. **LV.** 200 tons at **HW.**

Official.—Sec., H. C. Adams.

EYEMOUTH, Berwickshire, Scotland. Lat. 55° 52' 25" N; long. 2° 5' W. Situated at the mouth of the Eye, 5 miles from Berwick. **Auth.** Harb. Trustees, under statute 2 Vict., c. 36, and Provisional Order July, 1882. **THW.** f. and c. 2h 15m. **D.** dry at **LW.**; 12 to 18ft at entrance **HW.**; and 17ft at berths. Used chiefly by small vessels up to about 160 tons. Good quayage. A lifeboat station.

Charges.—Coastwise 4¹/₂d. Beyond Fraserboro' and Humber, 6¹/₂d, foreign 8¹/₂d.

Pilotage. From 30 to 50 tons reg., summer rates 1¹/₂, winter rates 1¹/₂.

Officials.—Clerk, John Wood; Harb. Master, James Paterson; Measurer, John Dickson.

Hotels.—"Ship" "Yawl," and "Royal" on quays.

FALLIN, Creek of Alloa. **D.** **HWST.** 11ft, and **HWNT.** 6ft.

Charges.—Harb. dues 1/ per mast.

FAHY HARBOUR, Galway, Ireland. Lat. 53° 55' N; long. 9° 58' W. Dry at **LW.** at entrance. Good security inside for vessels drawing up to 12ft.

FALMOUTH, Cornwall. Seaport. Lat. 50° 9' N ; long. 5° 4' W. Pop. 12,131. Auth. Harbour Commissioners, under a Provisional Order of 1870, and Docks Company, the latter having jurisdiction over the tidal harb. within the breakwater, and the graving docks. P. C. THW. f. and c. 4h 57m ; Sp. rise 16ft 6in ; N. rise 9ft 6in. W. prev. SW. to W. ; most dangerous SE. to E. Ry. G.W. Tr.—I. Wheat, barley, maize, guano, nitrate of soda, manures, coals, timber, grain, flour, bricks, slates, &c. ; E. Granite, paper, hemp and wire rope, copper ore, china-clay and stone, timber, granite, pilchards, fire-bricks, &c. LV. *Borderer*, 4,740 tons. The outer harb. is a capacious and secure anchorage. Vessels of the heaviest draft can enter at all times of tide. The tidal harb. is formed by two piers or breakwaters, the entrance is 1,000ft wide between the pier heads. The E. breakwater is 900ft long, and has 23ft at LWST. along its wharves, and 18ft on the W. side of the tidal harb. Area of tidal harb. 42 acres, with 2,000ft lin. of quayage space. Falmouth Docks include two graving docks owned by the Falmouth Dock Company, with iron and wood shipbuilding and repairing yards, and extensive warehouses for storage of goods. Cranes to lift 1 to 5 tons, and a large one to lift 40 tons.

Charges.—Anchorage dues $\frac{1}{2}$ d. per ton reg., payable twice only in each year. Windbound vessels exempt.

Graving Docks, &c. :—

Name.	Length.	Width.	Depth of Water OST.	H. and T. outside.	
				ST.	N.
	ft.	ft.	ft.	ft.	ft.
No. 1.....	350	50	14	14	11
No. 2.....	557	71	22	20	16 $\frac{1}{2}$
Patent Slip.....	100	25	—	10	6

Pilotage.—District. From the Dodman to the Lizard, and *vice versa*. Rates :—

8ft and under.	8 to 10ft.	11ft.	12ft.	13ft.	14ft.	15ft.	16ft.	17ft.	18ft.	19ft.	20ft.	21ft.	22ft.	23ft.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s.	s.	s.	s.	s.
A	30 0	35 0	40 0	45 0	50 0	55 0	60 0	70 0	80 0	90 0	100	120	130	150
B	20 0	21 0	25 0	30 0	33 0	36 0	40 0	46 0	53 0	60 0	66	80	86	100
C	10 6	13 0	15 6	18 6	20 0	22 0	24 0	26 6	29 6	33 0	37	41/6	46 52/6	59

A From sea to within an imaginary line drawn from the lighthouse on St. Anthony's Point, to the Block House on Pendennis Point.

B From inside an imaginary line drawn from the Manacles to the Dodman, within an imaginary line drawn from the lighthouse on St. Anthony's Point, to the Block House on Pendennis Point.

C From inside an imaginary line drawn from the lighthouse on St. Anthony's Point, to the Block House on Pendennis Point, to Carrick Roads, Falmouth Inner Harb., St. Mawes Harb., and St. Just Pool.

From Sea to Helford Harb., 2/6 foot dft. For vessels exceeding 23ft, an increase for each foot or part of a foot, in the same proportion as between 22 and 23ft. From Carrick Roads, and *vice versa*, to Falmouth Inner Harb., St. Mawes Harb., and St. Just

Pool, 1/6 foot dft. From Carrick Roads, and *vice versa*, to Restronguet 2/ foot dft. From Carrick Roads, and *vice versa*, to Malpas, 2/6 foot dft. Outward pilotage, 2/6 foot dft. The several Pilotage Rates herein specified are subject to a reduction of one-fourth part, in respect of vessels propelled by steam and vessels towed by steam vessels, provided that if any such vessel shall be propelled by steam, or towed by a steam vessel for a part only of the distance for which any such rate may be payable, the reduction of one-fourth shall be made on such part only of the said rate as shall be proportionate to the distance so propelled or towed. No vessel is to be brought to an anchor outside an imaginary line drawn from the Lighthouse on St. Anthony's Point to the Block House on Pendennis Point, unless at the express desire of the master, of which the Pilot is to procure a certificate to entitle him to the pilotage; and no vessel is to be brought to an anchor between an imaginary line drawn from the Lighthouse on St. Anthony's Point to the Block House on Pendennis Point, and an imaginary line drawn from the Block House on Pendennis Point to Carrick North Point, or between the buoys of the Narrows, unless under circumstances of unavoidable necessity. Pilots kept on board vessels under way outside the harbour, shall be entitled to the following scale of pay, viz:—

Not exceeding 6 hours	...	...	...	...	...	...	...	...	...	£0	10	6
6 and not ex. 24	„	...	...	...	...	...	...	...	...	1	1	0
24	„	30	„	...	...	...	...	...	...	1	11	6
30	„	48	„	...	...	...	...	...	...	2	2	0
48	„	54	„	...	...	...	...	...	...	2	12	6
54	„	72	„	...	...	...	...	...	...	3	3	0

And so on in like proportion for such service; and pilots remaining on board vessels at anchor within the harb., when requested by the master thereof so to do, or detained on board of vessels performing quarantine, shall receive the same rate of pay for such detention. N.B.—No allowance for a pilot going on board a ship in the harb. to take her out, except in extremely bad weather, or when ships are on shore, or making signal of distress, in which cases a reasonable compensation is to be made.

Towage.—Inward or outward. 5/ for every 50 tons up to 1,000 tons, and 10/ for every 100 tons above 1,000 tons. Transporting in the harbour, docking or undocking, three-fourths of above-mentioned rates. Assisting to moor after first anchor is dropped £1, if the tug has not earned inward towage. If paid by time the rate is £2 per hour under ordinary circumstances.

Officials.—Clerk to Harb. Commrs., W. J. Genn; Harb. Master, R. Sherris; Dock Sec. and Supt., F. J. Bowles; Acting Dock Master, J. Tallack.

Hotels.—"Falmouth," "Royal," "Greenbank," &c.

FAREHAM, Hants. A creek of Portsmouth, taking vessels of up to 300 tons. D. HWST. 12ft, HWNT. 9ft.

Official.—Coll. of Dues, R. Pye.

FAVERSHAM, Kent. On the Swale, about 2 miles from the entrance to this river. Lat. 51° 20' N; long. 0° 53' E. Pop. 13,290. THW. f. and c. oh 30m. Auth. Faversham Nav. Com. by Act of Parliament, 5 Vict., c. 42. P. NC. Harb. dry at LW. Sp. average from 12 to 12½ft; N. 8 to 9ft. W. prev. The harb. is protected from all winds. Ry. L.C. & D. Tr. —I. Timber, coal, iron, &c.; E. Grain, hops, cement, and wool. LV. 210 reg. tons.

15 acres. Quayage space about 5,500ft. Total shed area 158,000 sq yds. One 50 ton, three 6 ton, three 4 ton, six 2 ton cranes; three coal tips. Goods warehouses, cattle sheds, &c. Patent grain elevator, 300ft long by 90ft wide and 140ft high. Storage capacity 30,000 tons, and every accommodation for shipping. Patent lifting dock. New gridiron 310ft by 50ft. D. HWSF. 15ft. IIWNT. 8h 6m. Sheltered from all winds and run of tides.

Charges.—Harb. dues, foreign 3d ton voyage, Wyre light dues 3d ton voyage. Coasting 1d ton voyage, Wyre light dues 1d ton each voyage for three voyages; Walney light dues 3d ton per year. Dock rates from 1½d to 10d. Charges for labour. Passenger tolls. Wharfage. Providing boats 10/.

Pilotage.—District. From sea (that is, Morecambe Bay Lightship) into and out of the harb. and along the coast from Formby Point to Haverigg Point of Dudden. Rates on vessels employed in the oversea trade : —

	Under 200 tons reg.	200 tons and under 600 tons reg.	600 tons and under 1,000 tons reg.	1,000 tons reg. and upwards.
	foot. s. d.	foot. s. d.	foot. s. d.	foot. s. d.
From within lines from Morecambe Bay Lightship to Formby Point and Haverigg Point respectively to Fleetwood and <i>vice versa</i> ..	6 0	8 0	9 0	10 0
From within a line with Black Comb, bearing NNE., to Fleetwood, and <i>vice versa</i>	4 0	5 0	6 0	7 0
From Danger Patch Buoy, or one mile outside the outer lighthouse, to Fleetwood, and <i>vice versa</i>	3 0	3 6	4 0	5 0
From the outer lighthouse, or within one mile outside thereof, to Fleetwood, and <i>vice versa</i>	2 6	2 6	3 0	4 0
From inside the outer lighthouse to Fleetwood, and <i>vice versa</i>	1 6	2 0	2 6	3 0

On vessels employed in the coasting trade one-half of these rates. Additional rate, for intermediate portions of a foot dft., as follows, viz. :—For 3 inches and under, no addition; for more than 3 inches and under 9 inches, the medium between the two rates; for 9 inches and upwards, the rate for the next foot. For transporting ships from one berth to another within the harb. 10/6. If a master retain or employ a pilot whilst at anchor, the lay days to be 7/6 per day. All coasting steam vessels making more than one voyage per week pay half these rates.

Towage.—Coasting vessels to and from harb. to Screw Light 3d ton, minimum £2 2s. Foreign vessels, Fleetwood harb. to and from Danger Patch 3d ton, minimum £3 3s.; Fleetwood harb. to and from Screw Light £3 3s. Beyond Danger Patch Buoy, or beyond North-west Buoy at rate of £3 3s hour. Towing from sea and docking same tide 3d ton. Assisting to dock ship towed by other than harb. tug 1½d ton.

Officials.—Sec. and Harb. Master, Thomas H. Carr; Marine Supt., Capt. Jackson; Dock Agent, J. N. Clarkson.

FLINT DOCK, Flintshire, Wales (see Chester). Lat. 53° 15' N; long. 3° 9' W. Situated on the estuary of

Charges.—Tonnage on vessels to or from foreign ports 8d, on coasting vessels 4d; windbound vessels, coasting, 1d; foreign, 2d.

Pilotage. —							
	£	s.	d.		£	s.	d.
30 to 50 tons	0	10	0	100 to 120 tons.....	1	0	0
50 „ 60 „	0	12	0	120 „ 150 „	1	3	0
60 „ 70 „	0	13	0	150 „ 200 „	1	10	0
70 „ 80 „	0	14	0	200 „ 250 „	1	15	0
80 „ 90 „	0	16	0	250 tons and upwards	2	0	0
90 „ 100 „	0	17	0				

Officials.—Clerk, Andrew Tarras; Harb. Master, George Mackay; Harb. Treasurer and Coll., John Cranna, jun.

FREMINGTON QUAY, Devonshire. **Auth.** L. and S. W. Ry. Co. **Accn.** Tidal harb. about 900ft long, with quayage about 1,250ft. **D.** Dry LW.; 18ft HWST. Used by small vessels of about 100 tons discharging coals from S. Wales. Cranes lift from 2 to 10 tons.

Official.—F. J. Macaulay, Waterloo Station, S. W. Ry., London.

FRENCH PORT, Co. Mayo. Lat. 54° 15' N; long. 10° 3' W. An anchorage for vessels drawing 12ft.

FROSCAVEG BAY, I. of Skye. Lat. 57° 23' N; long. 6° 26' W. A small pier harb., dry at LW.

GAINSBOROUGH, Lincolnshire. An inland port situated on the Trent. Lat. 53° 24' N; long. 0° 45' W. Ry. G.N. Steamers ply between this place and Hull, and it is in communication with many inland towns by means of canals. No harb., but vessels lie in the river. A wharf at Galthorp.

Official.—Burgess Constable, E. Pearson.

GALWAY, Co. Galway. On the Corrib. Lat. 53° 18' N; long. 9° 5' 30" W. **Pop.** 14,800. **Auth.** Harb. Commissioners under statutes 16 and 17 Vict. **P. NC.** THW. 4h 35m; Sp. rise 16ft; N. rise 11ft. **D.** in harb. ST. 18ft to 20ft; NT. 12ft to 14ft. **W.** prev. W. and SW. **Ry.** M.G.W. **Tr.** General. **LV.** using the harb. are steam vessels, including H.M. gunboats, and all classes of sailing vessels. The largest vessel can enter the roadstead and lie there at anchor in safety. There are two wet docks with an area of 9 acres, which will accommodate vessels of 16ft dft.; these can enter at OST. There is also a pier about 115ft long, with a depth of 20ft at OST.

Charges.—Dues for roadstead 6d ton, new dock 8d ton.

Pilotage.—**District.** The Port of Galway is divided into two pilotage districts, one called the Outer, and the other the Inner. The outer district extends from a line from Gulin Head, to the western point of the Arran Islands, and from thence to Hag's Head, and to the roadstead of Galway. The inner district extends from the roadstead to the docks and quays. **Rates.** From a line drawn between Black Head and Spiddal to the roadstead, and *vice versa*: 50 tons and under 75 tons 12/6, and 2/6 additional for every 25 tons. Half the above rate payable from the roadstead to the docks, and *vice versa*. A vessel taking a pilot at or outside Arran to the Black Head Line, or from Black Head Line to Arran Islands, by either Sound, pays 2/6 for every 25 tons reg., in addition to these rates.

Towage.—As per agreement.

Officials.—Sec. to Harb. Commrs, R. Stephens; Harb. Master, L. Moore; Manager M.G.W. Ry., J. E. Ward; Coll. of H.M. Cust., J. Kearns.

GALTHORP, a wharf at Gainsborough.

GANNEL, a creek of Padstow. D. HWST. 21ft, HWNT. 12ft 6in.

GARDENSTOWN, Banffshire. Near Troup Head. Lat. 57° 40' N; long. 2° 20' W. Auth. Owner, Col. Francis Campbell, of Troup, under the Gardenstown Harbour Order, 1876. THW. f. and c. oh 30m. Accn. Harbour is of triangular shape, with W.S. and E. quays, length of quayage being 1,669ft. D. Dry at LW., 11½ft HWST, and 9ft HWNT. W. prev. and most dang. N to NE. LV. 135 tons.

Charges.—3d per ton reg.

Pilotage.—4d per ton reg.

Officials.—Agents, Burnett & Reid, of Aberdeen. Harb. Master, Capt. J. T. Nicolson.

Hotel.—“Garden Arms” Hotel.

GARLIESTOWN, Wigtonshire.—Lat. 54° 45' N; long. 4° 20' W. THW. corresponds with time of Liverpool. Auth. Harb. Committee, without Parliamentary powers. W. prev. S and SE. Accn. Tidal harbour, dry at LW., with 18ft HWST, and 10 to 12ft HWNT. LV. 300 tons. Crane power to 5 tons. Covered sheds, passenger steamer to Liverpool weekly.

Charges.—1½d per ton reg. on vessels discharging or loading, 1d per ton on vessels taking shelter. Dues on cargo landed: coal and lime 1d per ton, manures and feeding stuffs 3d, other goods from 1d to 1/8 per ton. Harb. boat 2/ to 10/ according to tonnage.

Pilotage.—5/ to 10/.

Officials.—Sec., J. Fingland; Harb. Master, Robt. Highet.

Hotels.—“Galloway Arms” and “Queen’s Arms.”

GARMOUTH, or Kingston, Morayshire. Lat. 57° 41' N; long. 3° 10' W. There are no harb. works. Ships lie in the estuary of the River Spey.

GARSTON DOCKS, Lancashire. On the Upper Mersey, 4 miles S. of the Liverpool S. Docks, and on the same side of the river. Auth. L. & N.W. Ry. Co., under Company’s Acts of Parliament. The river is navigable for vessels up to 1,200 reg. ton. Ry. L. & N.W. Tr.—General I. and E., specially coals E. LV. Steamers of 1,995 reg. ton. and sailing vessels of 1,800 reg. ton. THW. f. and c. 12h om noon. Accn. :—

Name.	Area.	Width.	Length.	Depth over Sill.	
				ST.	TN.
Old Dock	acres. 6	ft. 50	ft. 270	ft. in. 25 0	ft. in. 17 9
New Dock.....	8	55	370	27 0	19 9

There is a gridiron 300ft long, situated so as to give vessels four hours clear between the tides for repairs; hydraulic capstans; numerous cranes up to 40 tons’ power; patent machinery for weighing cargoes; special facilities for shipment of coal, including eight high-level coal-tips, capable of tipping 1,000 tons each per day; about 113 acres of storage accommodation for goods; railway lines along docks and quays; more than 5,000ft lin. of quayage space.

Pilotage.—See Liverpool.

Towage.—See Liverpool.

iron, copper, machinery, chemicals, coal, &c. LV. entering the Clyde 23ft dft. Glasgow is the chief port, and first commercial manufacturing city of Scotland. Its manufactures are unequalled for variety by any town of the United Kingdom, excepting London; it is the largest shipbuilding port in the world. Accn. The property of the Clyde Trustees is as follows:—Total length of quayage of harbs. and docks 10,624 lin. yds; area of water space 153½ acres; area of quays, roads, sheds, &c., 73½ acres; area of sheds 27 acres; area of timber yards, 17 acres; total area of lands, including quays, roads, yards, works, and properties belonging to the Trustees, but excluding all water space, about 230 acres. Kingston dock, a tidal basin, 5½ acres of water area, entrance, 60ft wide, general depth, 23 to 24ft at HWOST., total length of quayage, 830 yds; quay space covers about 3½ acres, and is provided with goods sheds, portable steam cranes, and railway connections; the entrance is spanned by a swing bridge, opened and shut by steam power. Queen's Dock, a tidal basin or dock, having an outer basin 1,000ft long by 695ft at the widest part, a north basin, 1,866ft long by 270ft wide, and a south basin, 1,647ft long by 230ft wide, with a quay between, 19½ft broad; entrance 100ft wide; total water area 33½ acres; general depth from 27 to 30ft at HW.; quay space, about 27½ acres; total length of quayage, 3,334yds. The north quay is reserved for coal and mineral traffic, and is provided with four 19-ton hydraulic cranes, two 35cwt. portable hydraulic cranes, and two 3-ton and two 5-ton portable steam cranes. The quay is provided with lines of rails in connection with the N.B. and Cal. Rys., and there are 21 hydraulic capstans for working the wagons at the cranes. The west quay is provided with a 30-cwt. portable hydraulic crane, and the centre quay with a 15-ton steam crane; the south and centre quays have goods sheds 60ft wide, and include several enclosed portions for transit purposes, searchers' offices, &c., the whole covering an area of nearly 7½ acres; the dock entrance is spanned by a swing bridge worked by hydraulic power; it connects the north-west and south quays, and carries road and railway traffic, the lines of rails extending all round the docks. The hydraulic power is provided by two pumping engines, one of 75 and one of 100-horse power, supplied by steam from four boilers and an accumulator, giving a pressure of 700lb per square inch in the mains. There are a customs, watch-house, dock master's and superintendent's offices, &c., and several 30-ton weighing machines for cart and wagon traffic are also erected on the quays; the quays and sheds are lighted with gas, and a water main is laid along the breast of the quays for water supply to vessels, and for fire extinguishing purposes. The area of water-space in Glasgow Upper Harb., opposite the quay, which is only on one side, and 505yds long, is about 14 acres, the depth near to the face of the quay being from 15 to 17ft at HW. The Lower Harb. has a water area of about 100 acres opposite the quays, and a depth of 24 to 27ft at HWOST. The total length of quays is 5,955yds. During the last 20 years the quays and wharves of the Lower Harb. have been extended down the river a distance of 1,512yds on the north side, and 525½yds on the south side. The quay space, amounting to about 39½ acres, is provided with goods' sheds, lines of rail in connection with the Cal. and N.B. Rys., a 60-ton and a 75-ton steam crane, two 75-ton weighing machines, several 30-ton, 20-ton and 15-ton weighing machines for cart and railway traffic. The quays

the Garelochhead and back for a less sum than 11/ each way. For every day the pilot is kept on board after the compasses are adjusted he is entitled to charge 7/6. For piloting vessels up or down the Leven, to or from Dumbarton, the pilots are not entitled to charge more than 4/ in addition to the rate for piloting such vessels on the Clyde, and 4/ for each additional tide he may be detained after the first. Any pilot, whether deep-sea or river, who may be detained at the request of the owner or person in charge of the vessel, after his duties as pilot have been completed, in addition to receiving his provisions, is to be paid 7/6 per day, and so in proportion for any lesser period. No differential rates are recoverable in respect of foreign vessels. Shifting vessels in harbour, under 500 tons 7/6; 500 tons and upwards 10/. All vessels to and from Renfrew, Paisley Water, and Dalmuir, are charged the same as a shift, but if required to go more than once for the same vessel, the pilot to be paid for expenses every time after the first 2/6, attending launch 15/; and per tide detention 5/. Bowling and Dumbarton on the same rates as to and from Greenock. Leven Pilotage.—All vessels under 100 tons reg. 5/; all vessels over 100 tons and under 500, 7/6; all vessels of 500 tons and upwards 10/; and per tide detention 5/. Steam vessels, when in the river, to remain as they are. All vessels towed to be allowed one-fifth of the full rates. Trial trips.—All vessels from 500 to 1,000 tons reg., per ton reg. 1½d, and for every additional 100 tons 5/, and for detention over 24 hours, per day 7/6. Gareloch Rate to remain as it is, but when a pilot is kept on board after compasses are adjusted he is entitled to 7/6 per day. Vessels under 500 tons reg. going on a trial trip £3. Detention money is charged only after the actual commencement of the service for which the pilot is engaged.

Towage.—Shifting Vessels. In harb. or towing to or from slip 20; to or from Partick slip or docks 30/; in harb. or to slip under 1,000 reg. tons net 30/; in harb. or to slip above 1,000 tons and under 2,000 40/; in harb. or to slip above 2,000 and under 3,000, 60/ each tug; larger in proportion. In Port Glasgow 40/ each tug. Vessels for Glasgow towed from sea to Greenock or Port Glasgow, and stopping there to discharge cargo 1/ ton to Glasgow; or, at the option of the owner, the rate from sea and river towage, according to the light draught. River rates, reg. ton:—

Vessels' draught of water at the Broomielaw, according to Pilot's certificate.	From Greenock to Glasgow, or to Dumbarton or Bowling.			
	Port Glasgow.	Dumbarton or Bowling.		
Under 10 feet	d.	d.	10	10
10 to 11	3	4		
11 " 12	3	4		
12 " 13	3	5	12	12
13 " 14	3	5		
14 " 15	3	6	14	14
15 " 16	3	6		
16 " 17	3	7		
17 " 18	3	7		
18 " 19	3	7		
19 " 20	3	8		
20 and upwards	3	8		

Deep-sea Towage according to the distance towed, in addition

to the river rates ; if any transfer of the work is made after the vessel is towed in, from Bowling to Dumbarton, or *vice versa*, 3d ton. Vessels outward bound from Glasgow or Bowling, if towed beyond the Tail of the Bank, as follows :—

Vessels' Reg. Tonnage.	Tail of Bank to								
	Cloch.	Point of Toward, or Rothesay Bay.	Small Cum-braes or Garroch-head.	Lamlash.	Pladda.	Ailsa Craig.	Sanda or Corswall.	Mull of Kintyre or Port Patrick.	Rathlin or Mull of Galloway.
Not ex. 200 tons	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Ab. 200 not ex. 300,,	3 0	5 0	7 0	9 0	10 0	13 0	15 0	18 0	23 0
„ 300 „ 400,,	3 10	5 10	7 10	10 0	11 0	14 0	16 10	19 0	24 0
„ 400 „ 500,,	4 0	6 10	8 0	10 10	11 10	14 10	17 10	20 0	25 0
„ 500 „ 600,,	4 10	7 0	8 10	11 0	12 0	15 0	18 10	21 0	26 0
„ 600 „ 700,,	5 0	7 10	9 0	11 10	12 10	15 10	19 10	22 10	27 10
„ 700 „ 800,,	5 10	8 10	10 0	12 10	13 10	16 10	20 10	23 10	28 10
„ 800 „ 900,,	6 0	9 10	11 0	13 10	14 10	17 10	21 10	25 0	30 0
„ 900 „ 1,000,,	6 0	10 10	12 0	14 10	15 10	18 10	22 10	26 0	31 0
	7 0	11 10	13 0	15 10	16 10	19 10	23 10	27 0	32 0

Larger £1 each 100 tons additional ; Innistrahull and St. John's Point £10 in addition to Rathlin rates. Scows from Greenock to Glasgow and *vice versa* 6d ton ; and between Bowling and Greenock 4d ton. All boats or wherries under 10 tons 5/. (See also "Greenock.")

Officials.—Sec. to Clyde Trustees, T. R. Mackenzie ; Dock and Harb. Master, Capt. R. White ; Coll. of H.M. Cust., J. Scott ; Lloyd's Surv., W. T. Mumford, S. Lapthorne, and J. Purdie.

The River Clyde, beyond Port Glasgow, is under the jurisdiction of the Clyde Lighthouse Trust.

GLASGOW PORT.—See Port Glasgow.

GLASSON DOCK.—See Lancaster.

GLENARM, Co. Antrim, Ireland. Lat. 54° 57' N ; long. 5° 57' W. Nearest Ry. Station, Larne. Auth.

The Eglinton Chemical Co., Ltd., of Glasgow. Pier 220ft long. D. 14ft to 19ft at HWOT. Area of harb. 7 acres. No dues, Berthage 360ft on N. side and 261ft on W. side. Used by Eglinton vessels only, except by permission of the official, Walter Jameson. There is a jetty with 90ft frontage belonging to the Antrim Iron Ore Co., D. 16 to 18ft. HWOT. Official for Jetty, F. Gendall. Most dangerous winds N., but harb. is well protected, except that vessels cannot lie alongside jetty with wind NW. or round by N. & E. to SE. The trade of the port amounts to 150,000 tons per year.

No Dues.—Used by vessels shipping lime.

Official.—Gen. Man., W. Donald.

Hotel.—"Antrim Arms," Glenarm.

GLENCAPLE.—See Dumfries.

GLENGARIFF HARBOUR, Co. Cork, Ireland. Lat. 51° 45' N ; long. 9° 34' W. Harb.

will accommodate vessels drawing up to 25ft. THW. f. and c. 4h om.

GLOUCESTER.—See Sharpness.

GOOLE, Yorkshire. On the right bank of the Ouse, 27 miles above Hull ; most inland port on E. coast. Lat. 53° 40' N ; long. 0° 52' W. Pop. 15,000. Auth. Aire and Calder Nav.

(which extends to the principal inland towns of Yorkshire and Lancashire and the coalfields), under statutes 1 Geo. IV., c. 39, and 9 Geo. IV., c. 98. P. C. THW. 7h 26m; Sp. rise 14ft; R. of N. 10ft. Vessels of 17ft to 18½ft dft. frequent the port at ST., and those of 13½ft to 15ft at NT. Rys. L. & Y. and N.E. Tr.—I. Timber, dyewood, grain, seed, olive oil, hemp, flax, iron, fruit, sugar, &c.; E. Coal, stone, machinery, earthenware, cotton and manufactured goods. LV. *Carl Hindric*, 1,067 reg. ton. Accn.:—

Name.	Length.	Width.	Quay- age.	Depth HWST.
	ft.	ft.	ft.	ft.
Aldam Docks.....	466	378	1,548	22
Barge Dock	870	150	1,899	21
There are hoists for hauling up iron barges filled with 40 tons of coal and tipping the coal into vessels in this dock.				
Harbour Dock (with Timber Pond, 614ft x 322ft)	260	210	780	21
Branch Dock, No. 1	280	77	627	21
Railway Dock	620	200	2,100	22
Ship Dock	700	205	1,760	22
Steamship Dock	570	440	1,740	22

There is also a dry dock and a patent slipway, 180ft long, with lifting power of 200 tons. A canal or dock for inland craft is provided, measuring 300ft x 151ft with a water area of one acre. Length of quayage 750ft. There are also timber ponds, of one, two, and three acres respectively.

Spacious sheds. Direct inland navigation with Midland districts. Extensive bonding warehouses and cellarage.

Charges.—Dock dues 2d to 9d; vessels under 50 tons 5/ each. No dues on vessels coming or going through the Aire and Calder Nav. Harb. dues. Usual Humber dues, viz.—Whitton light dues 4d for every complete 10 tons of reg. ton. Buoyage, under 30 tons, 2/6, and 6d for every complete 10 tons additional reg. ton. Anchorage from 1/ from 20 to 44 tons, to 2/6 for 200 tons and upwards. Ouse improvement tolls 1d reg. ton.

Pilotage.—District. Into and out of the Port of Goole, and upon any part of the Humber between the said port and a certain part of Hull Roads. Rates per foot. For all ships and vessels, laden or light, piloted inwards from Hull Roads in the Humber, or from any part of the river above Hull Roads; or outwards from Goole, or upon any part of the Humber below Goole to Hull Roads as follows:—Vessels of not less than 10ft draught, 1/9 per foot; of 10ft draught and upwards, 2/. For all ships and vessels, laden or light, piloted from Hull or from Hull Roads to any place below Oysterness or Ferriby Sluice, in the river 1/, and so in proportion for half a foot. For all ships and vessels, laden or light, piloted from Oysterness or Ferriby Sluice to Hull or to Hull Roads 1/6, and so in proportion for half a foot. All ships and vessels piloted from or to Oysterness or Ferriby Sluice pay, in addition to the above rates, the sum of 5/ per day for the detention of any pilot on board. Ships and vessels not drawing so much as 6ft deemed and considered as drawing 6ft and pay accordingly. NOTE.—For a fractional part of a foot, being not less than half a foot, a proportional rate.

Towage.—Hull to Goole: Loaded vessels 6d; light vessels 4½d reg. ton each way. Through Goole Reach: vessels drawing above 9ft, 10/; vessels drawing 7ft and under 9ft, 7/6; smaller vessels 5/. Other distances as per agreement.

age for every vessel piloted into or out of the harbour of Grange-mouth shall be as follows :—

SAILING VESSELS.		Per foot of the draught of water of the vessel at the time of entering or leaving the harbour.		
For vessels under 100 tons register		£	s	d
„ of 100 tons and under 200 tons register		0	1	3
„ of 200 „ „ 300 „		0	1	6
„ of 300 „ and upwards		0	2	0

STEAM VESSELS.		For each Steam Vessel inward or outward.		
Under 200 tons register		£	s	d
200 and under 300 tons register		0	12	6
300 „ 400 „		0	15	0
400 „ 500 „		0	17	6
500 „ 600 „		1	0	0
600 „ 700 „		1	2	6
700 „ 800 „		1	5	0
800 „ 900 „		1	7	6
900 „ 1,000 „		1	10	0
1,000 tons and upwards		1	12	6

EXTRA ATTENDANCE.

For extra attendance not exceeding 12 hours, when requested by Ship Masters (other than piloting), 3s.

Officials.—Gen. Man. Cal. Ry., J. Thompson; Harb. and Dock Master, Capt. J. Pollock; Coll. of Dock and Harb. dues, C. Bibb; Coll. of H.M. Cust., James Russell.

GRANTON, Edinburgh. On Firth of Forth. Lat. 55° 59' N; long. 3° 15' W. Pop. 1,000. Auth. H.G. Duke of Buccleuch and Queensbury, K.T., under Statute William IV., c. 15, and Act 5 Vict., 1842. P.N.C. THW. f. and c. 2h 20m; Sp. rise 16ft; N. rise 12½ft; R. of N. 9ft. D. at LWST. in harb. 13ft. There is no bar. W, prev. blow from a SW. direction, and the NE. are most dangerous, but, as the water to seaward of the harb. is not particularly deep, and the Island of Inchkeith forms a breakwater, in that direction at a distance of between 4 and 5 miles, affording partial shelter, the sea is never so high as to prevent vessels entering the harb. Rys. Cal. and N.B. Tr. — I. Timber, iron, grain, esparto, pavement, cement, china clay, rosin, turpentine, bottles, bark, and live stock; E. Coal, iron, oil, machinery, castings, and general merchandise. LV. *Cousins Arabis*, 1,647 tons; *Haverton*, 1,645 tons. These ships are the largest which have arrived at the port with full cargoes. The *Seamew*, 765 reg. tons, is the largest vessel which has come to a discharging berth at LW. of OST. with a general cargo. Accn. There are no docks. The total area of the harb. (which is formed by two breakwaters, E. 2,840ft, and W. 2,987ft) is 129 acres, measured at HW., whereof 77 acres lie W. of the pier and 52 acres to E. Both the W. and E. breakwaters are carried into 13ft at LW. of ST., and the entrance between the heads is 340ft wide. A pier 200ft wide runs out

between the breakwaters for about 1,700ft. Hawthorn's Patent Slip, which can take vessels up to 1,400 reg. tons. is 260ft long, 40ft wide, with 13ft at ST., and 8ft at NT. There is good crannage accn., and every requisite of a first-class port. There are six coal tips, each loading about 110 tons per hour.

Charges.—Tonnage dues 2d to 9d reg. ton. Rates and dues as per schedule.

Pilotage.—District not defined. Rates. Same as Leith.

Towage.—As per agreement.

Officials.—Gen. Supt. of Harb., J. Howkins, C.E.; Coll. of H.M. Cust., A. J. W. Cameron.

GRAVESEND, Kent. On the S. side of River Thames. 20 miles SE. from London, and opposite Tilbury Docks. Vessels wait here for tide to come up to London. THW. f. and c. 1h 10m.

GT. GRIMSBY.—See Grimsby.

GT. WESTERN DOCKS, Mullbay.—See Plymouth.

GT. YARMOUTH.—See Yarmouth.

GREENFIELD, River Dee. 3 miles above Mostyn (see Chester).

GREENHITHE, River Thames. Ry. N.K. There is a pier at this place, used by vessels loading lime.

GREENOCK, Renfrew. On the Firth of Clyde. Lat. 55° 57' N; long. 4° 44' W. Pop. 77,000. Auth. Harbour Trust, under the Greenock Harbours Acts, 1866 and 1880. P. NC. THW. oh 8m; Sp. rise 10ft; N. rise 8½ft. W. prev. NW. to SW. Rys. G. & S.W. and Cal. Tr.—I. Sugar, timber, grain, cotton, hemp, iron, oil, fish; E. Refined sugar, coal, iron, and machinery. LV. Largest vessels afloat, 32ft sill. James Watt Dock only dock with gates on river. Accn. There is every accn. for shipping, hydraulic cranes, warehouses, &c.

Harbs.: Old Works:—



New Works:—Garvel Basin (tidal): quays, 2,480ft; depth along south-west pier, 35ft HW. for 600ft. James Watt Wet Dock: 32ft on sill; 2,000ft long by 300 to 350ft wide; central jetty; length of quays 6,400ft; grain stores. Great Harbour (tidal): 3,230ft long by 600ft wide, 35ft deep HW. when completed. The Greenock docks and piers are approached direct from the deep channel of the Frith. The new works present the feature of an "always afloat" dock, hitherto unknown on the Clyde; the James Watt Docks eastern and western entrances being closed by

Kinipple's caissons, and keeping in 32ft water at ordinary spring tides. Crane power up to 70 tons. Graving Docks, &c.:—

Name.	Length.		Width.		Depth of sill OHW.	
	ft.	in.	ft.	in.	ft.	in.
West Graving Dock	220	9	33	11	9	9
East ditto	360	7	38	0	11	10
Garvel ditto	635	0	60	6	20	0
Caird's ditto	238	0	45	0	13	0
Scott's ditto	360	0	48	0	14	6
Patent Slip	500	0	40	0	...	...

Charges.—Harb. rates. Foreign, divided into 6 classes, from 4d to 1/1 per ton covering in and out. River craft, coasting vessels, steam, for repairs, &c., in distress, exceptional, time, miscellaneous rates. Trimming charges, 2d to 6d ton. Rates on goods, sugar 10d, grain and flour 5d.

Pilotage.—District. Between Greenock and the Island of Little Cumbræ, including vessels proceeding outwards from and inwards to Port Glasgow. **Rates.** See Glasgow. P. NC.

Towage.—

From Greenock to—(or vice versa).

Larger, £1 per 100 tons additional. Innistrabull and St. John's Point £10 in addition to Rathlin rates. Light vessels from Greenock to Ardrossan and Troon, to load:—

Vessels' Reg. Tonnage.	From Greenock to Ardrossan.		From Greenock to Troon.		From Tail of Bank to Ardrossan.		From Tail of Bank to Troon.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Not ex 100 tons	4	10 0	5	10 0	4	10 0	5	0 0
Ab. 100 & not ex. 150	5	0 0	5	10 0	5	0 0	5	10 0
" 150 " 200 ..	5	10 0	6	0 0	5	10 0	6	0 0
" 200 " 250 ..	6	0 0	6	10 0	6	0 0	6	10 0
" 250 " 300 ..	6	10 0	7	10 0	6	10 0	7	0 0
" 300 " 400 ..	7	10 0	8	10 0	7	0 0	7	10 0
" 400 " 500 ..	9	0 0	10	0 0	8	0 0	8	10 0
" 500 " 600 ..	10	0 0	11	0 0	8	10 0	9	0 0
" 600 " 700 ..	11	0 0	12	0 0	8	10 0	9	10 0
" 700 " 800 ..	12	10 0	13	10 0	9	10 0	11	0 0
" 800 " 900 ..	13	10 0	14	10 0	10	10 0	11	10 0
" 900 " 1,000 ..	14	10 0	15	10 0	11	10 0	12	10 0

Larger, £1 for every 100 tons.

Officials.—Gen. Man. and Sec., T. Wilson ; Traffic Man., J. MacCunn ; Coll. of Harb. dues, D. Darroch ; Harb. and Dock Master, J. Baillie ; Coll. of H.M. Cust., T. Charlton.

The River Clyde is under the jurisdiction of the Clyde Lighthouse Trust.

Hotels.—"Tontine" and "White Hart."

GREENORE, Louth, Ireland. Lat. $54^{\circ} 1' 55''$ N ; long. $6^{\circ} 7' 52''$ W. Auth. L. & N.W. under the Dundalk, Newry, and Greenore Ry. Co.'s Acts of Parliament of 1863, 1867, 1869, and 1873. Accn. Area about 5 acres. D. 13 to 17 ft at LW. Chiefly used by the L. & N.W. Ry. Co.'s boats carrying cargo and passengers.

GREENWICH, River Thames. Port of London. 5 miles below London Bridge on S. side.

Official.—Sec., S. Reay, Euston, London.

GREER'S QUAY, Co. Louth, Ireland. Lat. $54^{\circ} 5' N$; long. $6^{\circ} 10' W$. Nearest railway station, Omeath, one mile distant. THW. f. and e. 12h om. Auth. Owner, A. F. Campbell, Esq., J P., of Warrenpoint. W. prev. SW. A tidal harb. with a pier 300ft long, dry at LW. and with 15ft HWST. Used by coasters of about 75 tons reg.

Charges.—Dock dues 2d per ton.

Official.—Harb. Master, Matthew Woods.

GREYSTONES, Co. Wicklow, Ireland. Lat $53^{\circ} 8' N$; long. $6^{\circ} 5' W$. A small place, with a pier belonging to the Grand Jury of Co. Wicklow. No dues.

Official.—Sec., E. N. Wynne, Wicklow.

GRIMSBY, Lincolnshire. On the Humber, 6 miles above Spurn Point. Lat. $53^{\circ} 32' N$. ; long. $0^{\circ} 5' W$. Pop. 28,500. Auth. M.S. & L. Ry. Co. P. C. THW. f. and c. 5h 36m Sp. rise $19\frac{1}{2}$ ft. ; N. rise $15\frac{1}{2}$ ft. W. prev. SW. to NW. ; the most favourable for vessels entering the port are from NE. to SE. Rys. M.S. & L. and G.N. Tr.—I Timber, iron, cotton, grain, seed, tar, oil, hemp, sugar, fruit, and general goods. E. Coal, salt, machinery, Manchester and other Midland goods, earthenware, cotton, &c. LV. Sailing ship *Bates Family*, 2,153 tons, and the steamer *Germania*, 2,123 tons reg. Accn. :—

Name	Area.	Length of lock.	Width of lock.	Depth of water on sill.	
				HWO ST	HWONT.
	acres.	ft. in.	ft. in.	ft. in.	ft. in.
Royal Dock	25	{ 300 large { 200 small	{ 70 large { 45 small	26 0	22 0
Union.....	$1\frac{1}{2}$	230 0	45 0	ft. 21	
Alexandra	48	145 0	35 0	18 0	13 6
Old Fish	12	{ 140 large { 100 small	{ 30 large { 20 small	{ 20 large { 18 small	{ 16 large { 13.6 small
New Fish	11	...	...	20 6	16 0
Width of entrance...		39 0			

Graving Docks, &c. :—

Name.	Length of dock.	On blocks.	Width of dock at			Depth of water on sill.	
			top.	bottom entrance		HWOST.	HWONT.
	ft.	ft.	ft.	ft.	ft.	ft. in.	ft. in.
No. 1	400	350	87	48	70	20 0	16 0
" 2	400	...	50	...	30	18 6	14 0
" 3 .....	...	143	30	...	...	10 6	...
Patent Slip	321	...	25			26 0	22 0
Gr. diron	220	...	50			26 0	22 0

Extensive warehouse accommodation. Fish landing stage. Foreign animals' wharf. Cranes and other appliances worked by hydraulic machinery.

Charges.—

Pilotage.—District. Into and out of the port or upon the Humber below Grimsby, and so far out to sea as to bring the Northness of Dimlington to bear or be seen a sufficient distance clear or open of the land to the southward thereof, so as to pass clear of the New Sand; and also along the coast northward hereof to the Northness of Dimlington southward to Donna Nook. **Rates, per foot.** From or to the distance at sea where the Northness of Dimlington bears west-south-west to the northward of Kilnsea North Cliff, to or from the Grimsby Docks $3/6$. From or to the distance at sea where Kilnsea North Cliff bears west-north-west to the northward of the New Sand Buoy, or the floating light vessel, at the entrance of the river Humber, to or from the Grimsby docks $2/6$. From or to the said New Sand Buoy, or the floating light vessel at the entrance of the river Humber, to the eastward of the point where the Spurn High Lighthouse bears north-east, to or from the Grimsby docks $2/2$. From or to the Spurn High Lighthouse bearing north-east, to or from the Grimsby docks $2/2$ foot. For the fractional part of a foot, not less than half a foot, a proportionate rate. For intermediate distances, a proportionate rate. Ships and vessels in ballast pay two-thirds of the above rate. Ships and vessels employed in the coasting trade, whether laden or in ballast, pay one-half the above rate. Ships and vessels drawing less than six ft pay for six ft. **New Holland.** Rates for all ships and vessels piloted from New Holland, and upon any part of the Humber between New Holland and Kingston-upon-Hull, and *vice versa*, 6d foot dft. For the fractional part of a foot, not less than half a foot, a proportionate rate. Ships and vessels in ballast pay two-thirds of the above rate. Ships and vessels employed in the coasting trade, whether laden or in ballast, pay one half the above rate. Ships and vessels drawing less than six ft pay for six ft.

Towage.—As per agreement.

Officials.—Gen. Man. M.S. & L. Ry. Co., W. Pollitt; Port Master, W. Alford Green; Principal Dock Master, Capt. Jewitt; Coll. of Cust., A. Richardson. The river Humber is under the jurisdiction of the Humber Conservancy.

GUARDBRIDGE or Eden Water, Fifeshire, a creek of St. Andrews. D. HWST. 9ft.

GUERNSEY.—See Channel Islands.

GWEEK, a creek of Port of Falmouth. D. HWST. 14ft. HWNT. 10ft

HAMOAZE.—See Plymouth.

HARRINGTON, Cumberland. Lat. 54° 37' N ; long. 3° 34' W.

A small port 5 miles N. of Whitehaven. A station on the Whitehaven & Penrith Ry. **Auth.** The Harbour Board. **Accn.** Area of inner Harbour 2½ acres ; quayage, 1250 ft. Dry at LW., 17ft HWST. Used by vessels of up to 800 tons, entering at S. tides. **THW.** f. and c. 11h 15m. Crane power to 10 tons.

Charges.—6d per reg. ton.

Official.—Harb. Master, James Douglas.

Hotel.—"Station."

HARTLAND, Devonshire. Lat. 51° 2' N ; long. 4° 30' W.

A small harb., dry at LW., accommodating one vessel of 75 tons. Owned by Sir G. Stuckley, Bart., of Moreton, Bideford. Dry at LW, 18ft HWST. **THW.** f. and c. 5h 56m.

HARTLEPOOL, West, and **HARTLEPOOL**, Durham. Lat. 54° 41' N ; long. 1° 11' W. **Pop.** 54,000. **Auth.** All the inner harb. and dock works in the Port of Hartlepool belong to the N.E. Ry. Co. The outer harb. is under the jurisdiction of the Harb. Comm. **D.** at entrance to harb. about 12ft OST. **THW.** 3h 28m ; Sp. rise 16ft ; N. rise 12ft. **W.** prev. are W., but the most dangerous are from N. to E. **Ry.** N.E. **Tr.**—I. Cattle, timber, grain, general. **LV.** at any time of tide, sailing 1,996 tons, steamer 2,424 tons ; **LV.** at LWST., 1,556 tons. **Accn.** :—

Name.	Dimensions about.	Area about.	Ent. wide	Quay-age.	Depth. HWST.	HWNT.
Central Dock....	1,100ft × 610ft	13 acres	60ft	2,900ft	26ft	22ft
North Basin ..	540ft × 240ft	3 "	60ft	1,390ft	26ft	22ft
South " ..	450ft × 220ft	2 "	60ft	900ft	21ft 6in	17ft 6in

There are two powerful sheer legs, lifting 80 tons each, and one of 30 tons' power, also several cranes lifting 30 cwt.

Union Dock	880ft × 490ft	8 acres	60ft	1,600ft	26ft	22ft
Timber "	760ft × 150ft	2 "	50ft	1,900ft	21ft	17ft
Jackson "	900ft × 535ft	13 "	60ft	2,680ft	{ 21ft 6in to 26ft	17ft 6in to 22ft

Steam cranes of various powers up to 15 tons.

Coal Dock	805ft × 383ft	8 acres	50ft	2,270ft	21ft 6in	17ft 6in
Victoria "	2,050ft × 420ft	19 "	..	4,680ft	21ft 6in	17ft 6in

There are 17 staiths, each 100 to 200 tons. Cranes of various powers, from 2 to 10 tons.

Swanson Dock ..	780ft × 460ft	9 acres	..	1,850ft	21ft 6in	17ft 6in
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Cranes from 1 to 3 tons' power.

Fleet of powerful tugs, owned by Dock Co.

At the various quays vessels can load and discharge at all times of the tide. Very extensive warehouses and every accn. of a first-class port. Graving Docks, & c. :—

Owner.	Name.	Length	Breadth.	H. T.	
				Sp.	N.
		ft.	ft.	ft.	ft.
W. Gray & Sons.....	Jackson	355	59	14½	11½
Do.	Swainson	330	50	15½	12½
R. Irvine & Co.	Harbour	315	47	15	11
N.E. Ry. (Public)	Dry Dock	550	50	19	15
Do. do.	Gridiron	150	60	8½	5½

Charges.—Dock and harb. rates vary from 2d to 1/ per ton. Tolls on cattle, wood, and other goods $\frac{1}{4}$ d per ton. Police, hospital, lifeboat, and ballast 1/- per ton. Wharfage. Harboursage.

Pilotage.—District. The Bay of Hartlepool, inside an imaginary line drawn from Black Hall Rocks, about three miles north of Hartlepool, to a point about two miles south of the mouth of the river Tees. Rates, per foot. For every British ship or other vessel piloted and conducted within the Hartlepool Pilotage District 1/6, except coasting vessels and vessels trading between the Elbe and Brest, both inclusive, which from April 1 to October 1, pay at the rate of 1/3. The Commrs. may charge vessels above 400 tons reg. $\frac{1}{4}$ d ton on such excess of reg. ton. over and above that number of tons both inwards and outwards, but this excess does not apply to vessels simply changing ports within the district. Vessels moving from harb. to docks or *vice versa*, not ex. 50 tons 2/6; ex. 50 and not ex. 200, 5/; ex. 200 and not ex. 400, 7/6; ex. 400, 10/. From and to each harb. within the port of Hartlepool:—When any vessel requires to change harbours in the port, the pilotage dues from and after April 1 to October 1, both inclusive, out of Hartlepool docks or harb. at the rate of 7 $\frac{1}{2}$ d foot, and into West Hartlepool docks or harb. the same rate; from and after October 1 to April 1 in the following year, both inclusive, out of Hartlepool docks or harb. 9d foot; into West Hartlepool Docks or harb. the same rate, and these dues are payable by vessels changing from the docks or harb. of West Hartlepool to the docks or harb. of Hartlepool.

Towage.—(East or West). 1 $\frac{1}{2}$ d per ton.

Officials.—Man. for N.E. Ry. Co., John Bland; Colls., J. Taylor and J. Sanderson; Goods Agents, C. Learman and J. Porritt; Dock Masters, Capt. W. Watson and John Marshall; Staith and Ballast Master, G. Hodgson; Coll. of H.M. Cust., W. R. Staveley.

HARTLEY, Northumberland. Four miles N. of N Shields. Ry. Blythe & Tyne. Harb. capable of accommodating vessels of 200 to 300 tons, but not now used.

HARWICH, Essex. At the SE. extremity of the estuary of the river Stour. Lat. 51° 56' N; long. 1° 17' E. Pop. 7,842. Auth. Harbour Conservancy Board. Owners of quays and piers, G.E. Ry. Co. P. NC. THW. 12h. 6m; Sp. rise 11 $\frac{1}{2}$ ft; N. rise 9 $\frac{3}{4}$ ft; D. There is no bar; the depth of LW. at harb. entrance is variable, but vessels of 16ft draught enter at LW. W. prev. E. to SE. in winter; SW. to NW. in summer. Ry. G.E. Tr.—I. Coal, timber, grain, eggs, butter, cheese, fruit, vegetables, cattle, horses, and every description of general merchandise; E. Cement, stone, general goods, and horses. LV. The harb. is used by vessels from all parts of the world. Accn. The harb. is formed by the broad estuaries of the Orwell and the Stour. The entrance is between ast one breakwater which runs about 1,500ft out, and a groyne and wooden breakwater at Landguard Point, on the Suffolk shore. Depth of water in harb. 30ft LWS'F., 27ft NT. *Parkeston Quay*, erected by the G.E. Ry. Co., is a free quay within the port of Harwich. By discharging at this quay vessels altogether escape the payment of any dock landing or quay dues. The quay is 1,800ft long, with a depth of water at LT. of 16ft, and HT. 27ft 6in. It can be approached at all times. Daily (Sundays excepted) passenger and goods service to and from Antwerp and Rotterdam by G.E. Ry. Co.'s fast steamers, bi-weekly ditto to Hamburg by G.S.N. Co.'s steamers, also bi-weekly to and from Esbjerg, Den-

Pilotage.—Foreign: Less than 10ft, 2/ per foot; 10 to 12ft, 2/6; 12 to 14ft, 3/; 14 to 16ft, 3/6; 16 and upwards 4/. Coasting: Under 100 tons 5/ per vessel, above 100 tons 3/4d per ton. If towed one-fourth less. There is a tug-boat, *The North Star*.

Officials.—Harb. Master, John Symons; Coll. Henry Thomas, Harb. Office.

Hotel.—"White Hart," proprietor, Henry Carah.

HEACHAM, a creek of King's Lynn, in the Wash.

HEBRIDES, or Western Islands, W. coast Scotland. Lat. between 55° 20' and 58° 30' N; long. between 5° 0' and 8° 0' W. The extent of the group (comprising about 300 islands) covers an area of about 180 miles by 30. Principal islands are Lewis and the small adjacent islands belonging to Ross-shire. Harris (S. part of Lewis) N & S Uist, Benbecula, Skye, Barra, Eig, and the small adjacent islands belonging to Invernesshire. Rum, Muck, Canna, Tiree, Mull, Lismore, Staffa, Luing, Scarba, Colonsay, Oransay, Jura, Isla, Gigha, Cara. &c., belonging to the Co. of Argyle. Bute, Arran, Cumbraes, Inchmarnock, and the Islands lying within the Frith of Clyde, belonging to Buteshire. Total area about 3 000 square miles. Population about 100,000.

HEDON HAVEN, Yorkshire. A small Harb. on the Humber, 4 miles below Hull. Auth. Commissioners, by statute 20th May, 1774. W. prev. SW. Used by vessels of up to 100 tons.

Official.—Clerk, James Watson.

HELEN, ST.—See St. Helen.

HELFORD RIVER, Cornwall. About 1 mile from the sea. The river discharges into a haven deep enough for vessels of 200 tons—and about a mile wide.

HELIERS, ST., Jersey.—See Channel Islands.

HELMSDALE, Sutherland, Scotland. Lat. 58° 6' N; long. 3° 39' W. Auth. Harb. trustees, under new provisional order. Accn. For vessels up to 145 tons. D. 2 ft LW. THW. at f. and c. 11h 32m. W. prev. W. to SW., dangerous SE. to SW.

Officials.—Chairman, D. McLean; Clerk and Treasurer, J. Hill.

HERM ISLAND, a small Island in the Channel Island Group, opposite Guernsey.

HERNE BAY, Kent, an open beach and watering place.

HESKETH BANK, a creek of Fleetwood.

HIGHBRIDGE.—See Bridgwater.

HOLLAND, a creek of Harwich.

HOLLAND, NEW, Lincolnshire. Opposite Hull. See Grimshy.

HOLLESLEY, Suffolk, near Orfordness. THW. at f. and c. 11h 30m.

HOLM, Orkneys. Auth. Commrs. of Piers and Harbours in the Co. of Orkney, under Act, 1872. W. prev. and most dangerous SE. and SW. Accn. Stone pier 3,000ft; 2ft 9in LWST., 12ft 9in HWST., 4ft 9in LWNT., 10ft 9in HWNT.

Official.—Clerk, J. Macrae, Kirkwall.

HOLYHEAD, N. Wales. Lat. 53° 18' 14" N; long. 4° 37' 1" W. Pop. 8,500. Auth. Board of Trade (Inner Port of Old Harb., L. & N.W. Ry. Co.) P. C. THW. 10h 11m; Sp. rise 16ft; N. rise 12½ft. D. at entrance at LWM., New Harb. 9 fathoms, in Old Harb. 17ft. W. SW. most prev., NW. to NE. most dangerous, as the harb. is least protected at these points. Ry. L. &

Vessels usually load and discharge for the undermentioned ports :—
 In the Albert and William Wright Docks : For New York, Boston, Bombay, Trieste, Cronstadt, Odessa, Gothenburg, Riga, Stockholm, Marseilles, Reval, Lisbon, &c. Humber Dock : For Amsterdam, Rotterdam, Hamburg, Antwerp, Harlingen, and Newcastle. Railway Dock : For Bergen, Copenhagen, Danzig, Drontheim, Stettin. Prince's Dock : For Bremen, Hamburg, Rotterdam, Rouen, Bordeaux, London, Leith, Dundee, Grangemouth, Aberdeen, Ipswich. Queen's Dock : For Abo, Wassa, Wyberg, Boston, London. Victoria Dock : For vessels engaged in the timber, seed, guano, and nitrate of soda trades. The St. Andrew's Dock is chiefly used for the fishing trade. Steam and hydraulic cranes :—

No.	Tons.		No.	
11	5	Hydraulic	No. 1	Timber Pond.
16	20	Steam Coaling	S. side	Railway Dock.
41	20	" "	W. "	Humber "
21	15	" "	N. "	Railway "
22	30	" "	N. "	Albert "
26	45	" "	N. "	Victoria "
23	5	Hydraulic	No. 1	Timber Pond.
29	5	Steam	No. 2	" "
32	15	Hydraulic Coaling	N. side	Albert Dock.
33	20	Steam "	N. "	" "
34	20	" "	N. "	" "
35	3	Hydraulic	S. "	" "
36	20	Steam Coaling	S. "	Victoria Dock. Foreign Cattle Depôts.
38	3	Hydraulic	S. "	Queen's Dock.
40	5	Steam	W. "	Victoria "
42	25	" Coaling.	S. "	Albert Dock, 2 Steam Tips; 2 Hoists; Foreign Cattle Depôts.
43	10	Steam	S.W. "	Victoria Dock.
46	25	Hydraulic	N. "	Wm. Wright Dock.

In addition to the above, the Company have exclusive of movable cranes, 128 fixed power and hand cranes, the lifting capacity of which varies from one to ten tons, and also sheer legs on N. side of Albert Dock, lifting up to 80 tons. Railway Lines and Sidings :—The Hull Dock Co.'s Railway lines and sidings are in connection with the N.E., the L. & Y., the M., the M.S. & L., and other railways. Warehouses :—

Storage capacity for grain and seed, after deducting 15 to 20 per cent. for space lost in storage.

No. Dock.	Qrs.	Qrs.	No. Dock.	Qrs.	Qrs.
2 Queen's	6,020		15 Victoria	12,276	
3 "	5,186		16 "	6,555	
4 "	875				31,837
		12,081	17 Albert	18,386	
6 Prince's	3,685		19 "	8,219	
7 "	16,945		20 "	14,546	
		20,630	21 "	18,939	
8 Railway	22,201		24 "	4,306	
11 "	6,050		25 "	10,817	
12 "	27,339		26 "	25,408	
13 "	8,423		28 Wm. Wright	42,000	
		64,013	29 "	42,000	
9 Humber	2,614		35 Albert ..	21,579	
10 "	2,615				206,200
		5,229			
14 Victoria	13,006				

Deal yard accn. at the Victoria Dock 193,300 sq yds; at the Queen's Dock 19,000 sq yds. Also the Company possess a considerable quantity of land available for temporary stowage of wood at the Railway, Albert, and William Wright Docks. Timber

pond accn. 38a 2r 36p. Other storage accn. With a view of developing the importation of grain and seed from America, India, and the colonies, the Company have constructed a despatch shed, covering nearly an acre of quay space on the S. side of the Albert Dock, with railway lines through and outside the same, and provided with movable hydraulic cranes capable of working with great rapidity. Quay and shed space:—Extensive quay accn. exists at each dock, and numerous sheds. Guano warehouses:—

No. 1, Victoria Dock, 5,321; No. 30, ditto, 3,375; No. 31, ditto, 17,912; No. 32, ditto, 10,500 tons—total, 37,108 tons.

Foreign cattle depôts:—Accn. for general storage of goods, 15,000 tons. Victoria Docks have accn. for 350 oxen, and 2,500 sheep. Albert Docks have accn. for 283 oxen, and 630 sheep.

Owner.	Length.	Breadth.	Lifting power.
	ft.	ft.	tons.
Bailey & Leetham	300	22	2,000
Earle & Co. No. 1	750	36	1,600
Do. " 2	700	37½	1,800
Do. " 3	750	36	2,000
Do. " 4	800	40	2,500

Hull & Barnsley Co.'s Alexandra Dock, on the north side of the river Humber; water space 46 acres, depth of water in dock HWST. 34½ft. Area of quays 160 acres, length of quays 2 miles. Length of entrance lock 550ft, width 85ft. Depth of water on sill 34ft HWOST., 28ft HWONT., 18ft LWONT., 12ft LWOST. There is good anchorage in 40ft at LW. in the roadstead opposite the entrance. The lock gates are opened by hydraulic power, and ships can be passed in and out at all times with expedition.

Graving docks:—

Owner.	Name.	Length.		Width.			Depth of Water on Sill.	
		From Gates to Head.	On Blocks.	Of Entrance.	At Top.	At Bottom.	ST.	NT.
		ft.	ft.	ft.	ft.	ft.	ft.	ft.
Old Dock Co.	No. 1 Grav. Dock	501	460	50	85	61	21	15
" "	" 2 "	420	400	35	100	50	18	13
		Length.		Breadth.		Height of Tides.		Accn.
		ft.	ft.	ft.	ft.	ft.	ft.	
Lengfield & Ward...	...	163		36	...	...	...
B. B. Scatt.	Dry Dock	122		38	14	9		
McCann's	"	84		23½	13	8		
Hull & Barnsley ...	No. 1	500		60	19	13		{ Vessels of 1,600 reg. ton. 1,800 reg. ton.
" "	" 2	550		65	21½	15½		
Westerman	Dry Dock	145		37	14½	9½		
Sanderson	"	170		33½	14	8		
Gibson	Union Dry Dock	214		48½	14	9		
Hull Cen. Dock Co.	S. E. "	310		42½	20½	14		
Hunt & Fowler	Dry Dock	120		39	13½	7½		
G. W. Brown	"	140		27	9½	3½		

Charges.—Dock rates vary from 1d to 1/4½ ton. Wharfage rates on all goods passing over quays. Trimming charges (coal). Buoyage, 100 tons 6/6 less 10%, every additional 10 tons, 6d less 10%. Anchorage 1/ to 2/6 vessel, according to size. Jettage 1/6 to 7/ vessel. Rates on goods.

Pilotage.—District. Into and out of the port of Kingston-upon-Hull and of the port of Great Grimsby, and upon any part of the river Humber below Kingston-upon-Hull, and so far out at sea as to bring the Northness of Dimlington to bear or be seen a sufficient distance clear or open of the land to the southward thereof, so as to pass clear of the New Sand; and also along the coast northward to the Northness of Dimlington, and southward to Donna Nook. **Rates per foot.** From or to the distance at sea where the Northness of Dimlington bears west-south-west to the northward of Kilnsea North Cliff, to or from Hawke Roads or Grimsby Roads 2/6, Whitebooth Roads 3/6, the port of Kingston-upon-Hull 5/; from or to the distance at sea where Kilnsea North Cliff bears west-north-west to the north of the New Sand buoy, or the floating light vessel, at the entrance of the river Humber, to or from Hawke Roads or Grimsby Roads 1/6, Whitebooth Roads 2/6, the port of Kingston-upon-Hull 4/; from or to the said New Sand buoy or the floating light vessel at the entrance of the river Humber, to the eastward of the point where the Spurn High Lighthouse bears north-east to or from Hawke Roads or Grimsby Roads 1/, Whitebooth Roads 2/, the port of Kingston-upon-Hull 3/6; from or to the Spurn High Lighthouse, bearing north-east to or from Hawke Roads or Grimsby Roads 1/, Whitebooth Roads 2/, the port of Kingston-upon-Hull 3/6; from or to the Hawke Roads, the buoy of the Burcome or Grimsby Roads to or from Whitebooth Roads 1/6, the port of Kingston-upon-Hull 2/6; from or to Whitebooth Roads to or from the port of Kingston-upon-Hull 1/6. For a fractional part of a foot, not less than half a foot, a proportionate rate. For intermediate distances a proportionate rate. Ships and vessels in ballast pay only two-thirds of the above rates. Ships and vessels employed in the coasting trade, whether laden or in ballast, pay one-half of the above rates. Ships and vessels drawing less than 6ft pay for 6ft.

Towage.—As per agreement.

Officials.—*Old Dock Co.*, Gen. Man. and Sec., E. H. Garbett; Principal Dock Master, Capt. H. Robinson; Supt. Wharfinger, H. Best. *Hull & Barnsley Railway & Dock Co.*, Gen. Man., V. W. Hill; Sec., I. Daniell; Coll. of H.M. Cust., E. P. Bishopp Smith; Lloyd's Surv., J. McNeil; Lloyd's Engineer, Jas. Trines. The River Humber is under the jurisdiction of the Humber Conservancy. E. Wilson, Sol. Clerk.

Hotels.—"Royal Station," "Vittoria," "Imperial," and "George."

HYPHE, Kent. One of the Cinque Ports. The harb. is choked up. A lifeboat station.

HYPHE, Essex. River Colne. Auth. Commrs., under the Colchester Navigation Act, 10 and 11 Vict., c. 181.

Accn. A quay 1,485ft with D. 2ft LW. Used by vessels up to 60 tons.

Official.—Clerk, H. S. Goody, Colchester.

IKEN.—See Aldeborough.

ILFRACOMBE, Devonshire. Lat. $51^{\circ} 13' N$; long. $4^{\circ} 7' 30''$
W. Rys. Barnstable & North Devon, L.S.W.,
and G.W. THW. f. and c. 6h om. Auth. Receiver of Court of
Chancery, under Acts of Parliament and Prov. Order, and the Pier
and Harb. Confirmation Act, 1870, No. 1. Accn. Inner harb.
has area of about 6 acres, and the outer harb. an area of 4 acres.
Dry at LWST. Vessels drawing 20ft enter at HWST., and draw-
ing 14ft HWNT. Quayage 600ft. Also a low water jetty, 5ft
LWST., much used by excursion steamers. Crane power to 3 tons.
Entrance dries at LW. W. prev. SE. to SW.

Charges.—Windbound 1d per ton, coasting 2d, foreign ports 4d.

Pilotage.—By agreement.

Official.—Harb. Master, J. C. Dennis.

Hotels.—“Ilfracombe,” “Royal Britannia,” “Royal,”
“Clarence,” &c.

INCHARD LOCH, Sutherlandshire. Lat. $58^{\circ} 27' N$; long.
 $5^{\circ} 7' W$. A small land-locked basin, used
as an anchorage by fishing boats.

INCHYRA, a creek of Perth. D. HWST. 14ft, HWNT. 8ft.

Official.—Harb. Master, J. Manby.

INNISLYRE, Co. Mayo. A deep and spacious anchorage in
Westport Harb., Clew Bay. Vessels are dis-
charged afloat in 20ft to 22ft water. THW. f. and c. 5h 2m.

Official.—J. Read, Sec. to Westport Harb. Commrs.

INVERARY, Argyllshire. Loch Fyne. Lat. $56^{\circ} 40' N$; long.
 $5^{\circ} 0' W$. Nearest railway station, Dalmary, 16
miles off. Auth. Town Council, under the Royal Charter of the
Burgh. Accn. An anchorage, with a pier, used by steamers and
vessels of about 70 tons. D. 16ft LW. and 24ft HWST. THW.
f. and c. 12h om.

Charges.—According to tonnage.

Officials.—Town Clerk, A. Henderson; Harb. Master, J.
McVicar.

INVERGORDON, Ross-shire, Scotland. Lat. $57^{\circ} 43' N$; long.
 $4^{\circ} 15' W$. THW. f. and c. 11h 30m. Auth.
Owner, Capt. Macleod, of Cadboll, under Act 7 Geo. IV., c 43.
Accn. Tidal harb., dry at LW., formed by a pier 700ft. long,
carried out into 10ft at LW, and 23ft at HWST. Crane power to
3 tons. Used by vessels of up to 1,400 tons.

Charges.—Various, from 100 to 300 tons 4d per ton.

Officials.—Factor, J. Young; Harb. Master, A. Annandale.

Hotel.—The “Commercial.”

INVERKEITHING, Fife. Lat. $56^{\circ} 2' N$; long. $3^{\circ} 26' W$.
Auth. Town Council, under Crown
Charter. Ry. N. B. Accn. 90 acres; dries at LW., with about
9 to 10ft at HWST. Quayage about 1,000ft, land-locked. Used
by sailing vessels and steamers of light draught. THW. f. and c.
2h 37m. Patent slipway. LV. Steamers of 1,000 tons built here
have left the harbour light.

Charges.—According to table in charge of the harb. master.

Official.—Town Clerk, H. Grigor; Harb. Master, John Clark.

INVERNESS, Inverness-shire. On the Ness, about 1 mile
above its confluence with the Moray Firth and at
the NE. end of the Caledonian Canal. Lat. $57^{\circ} 28' N$; long. $4^{\circ} 13'$

W. Pop. 17,366. **Auth.** Harbour Trust, under statute 9 July, 1847, and Provisional Order 27 June, 1883. **P. NC.** **THW.** f. and c. at Kessock Pier, oh 18m; Sp. rise 12ft; N. rise 9½ft; R. of N. 7ft. **D.** on bar about 6ft at LWST. **W.** The harb. is so situated that no wind is dangerous. **Ry. H. Tr.**—I. Grain, guano, timber, tar, bones, coal, lime, iron. slates; E. Herrings, pit-props, sleepers, staves, timber, turnips, potatoes, and grain. **LV.** 688 tons, at LWST. 30 tons. **Accn.** The area of the harb., formed by the lower reach of the river Ness, is about 3 acres, and there are about 800 yards of quayage space. Depth at Old Harb. ST. rise 13ft to 14ft; NT. 10ft to 11ft; at New Quay (Thornbush) ST. 17ft to 18ft; NT. rise 13ft to 14ft.

Charges.—Dues 1½d ton; dues on ballast 2d ton.

Pilotage.—District. One section is licensed for the extent of the jurisdiction of the port authorities. **Rates.** Vessels under 50 tons 4/ in, and the same out, and 1d ton additional for every ton over 50 tons.

Towage.—2/6 per horse from sea to Thornbush; and if stopped at Thornbush for one tide, then from Thornbush to Old Harbour 2/6 per horse. Direct from sea to Old Harbour 3/ per horse.

Officials.—Clerks to Trust, A. P. and R. Hay, Solicitors; Ry. Man., A. Dougall; Harb. Mast., Capt. W. Morrison; Coll. of Harb. Dues, G. Munro; Coll. of H.M. Cust., S. Massy.

IPSWICH, Suffolk. On the Orwell, about 11 miles from the sea. Lat. 53° 35' N; long. 0° 4' E. **Pop.** 57,000. **Auth.** Dock Commission, under Statutes 45 Geo. III., c. 101, 1 Vic., c. 74, 15 Vic., c. 116, and 40 and 41 Vic., c. 216, P. N.C. **THW.** f. and c. oh 35m; Sp. rise 13½ft at Ipswich Dock. **D.** Between the entrance lock and Pin Mill Reach there is a depth of water in the river channel of 21½ft at OST and 18½ft at ONT. In Pin Mill Reach there are iron screw moorings and buoys for lightening with 22ft at LWST. **W.** prev. SW. to W.; no wind can be considered actually dangerous within the port limits. **Ry. G.E. Tr.**—I. Grain, cheese, timber, seeds, coal, wines and spirits; E. Iron, machinery, phosphates, agricultural implements, grain, patent manures, bricks, oil, roots, &c. **LV.** *Harvestoe*, 1,372 reg. ton. **Accn.** The area of the port is the whole of the estuary of the river Orwell above an imaginary line drawn between Shotley Point and Fagborough Cliff (the limits of the jurisdiction of the Harwich Harb. Conservancy Board), including therein a large floating dock. The area of the dock, which is approached by an entrance lock 300ft long, 50ft wide, is about 29½ acres. Depth on sill at mean HWST. 23½ft, NT. 20½ft. Warehouse accn. and every facility. The dock takes vessels of 17½ft dft. Within the floating dock there are 1,150yds of walled public quay, 300yds of the same unwallled, and with earth slope, 400yds of the Commissioners' and private quays, and 300yds of the Commissioners' ballast quay. On the E. bank of the river there is a timber quay. Outside the dock there are 1,000yds of walled tidal quay, used by vessels up to about 200 tons burthen, and 1,500yds of dwarf tidal quay on the frontages of roadways not used for trade. There are also tidal quays at Bournebridge Creek, at Pin Mill, Chelmondiston, and at Levington Creek. For ships and boats the present depth of the channel at Mulberry Middle, Downham Reach, is 22½ft and in Cliff Reach 21½ft at HWST. The depth of the dock over 15 acres at HWST.

level varies from 17½ft to 21ft. Crane power to 25 tons. Slips, &c. :—

Name.	Owner.	Length.	Width.	Depth on Sill, OHW.	Height of sides	
					S.	N
		ft.	ft.	ft.	ft.	ft.
Gridiron.....	Orvis & Fuller	240			9	6
Patent Slip	Bayley	132	30		8	5
Ditto.	Orvis & Fuller	100	30		8	4

(Carriage can be lengthened to 140ft.) }

Charges.—Import and export rates on goods. Wharfage 2d ton on customary dead weight.

Pilotage.—District. From Ipswich quays to Harwich Harb. and *vice versa*. Rates per foot. From the dock entrance to Downham Reach, or *vice versa*, for every sloop or vessel with one mast 1/; for every other vessel with two or more masts 1/3; from Downham Reach to Levington Creek, or *vice versa*, for every ship or vessel 6d; from Levington Creek to Harwich Harb., or *vice versa*, for every ship or vessel 6d; for every vessel coming inwards from Harwich Harb. to Downham Reach 1/; for every vessel outward bound from Downham Reach to Harwich Harb. 1/.

Towage.—Small vessels :—

From Ipswich to	Bridge.	Puntless.	Levington Creek.	Harwich.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Vessels 40 to 50 tons.	0 10 0	0 14 0	0 16 0	0 18 0
„ 50 „ 60 „	0 12 0	0 16 0	1 0 0	1 2 0
„ 60 „ 70 „	0 14 0	0 18 0	1 3 0	1 6 0
„ 70 „ 80 „	0 16 0	1 0 0	1 6 0	1 10 0
„ 80 „ 90 „	0 18 0	1 2 0	1 9 0	1 13 0
„ 90 „ 100 „	1 0 0	1 4 0	1 12 0	1 17 0

On the river Orwell :—

From Ipswich to	Downham Reach.	Pinmill.	Levington Creek.	Harwich.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Vessels from 100 to 110 tons.....	1 2 0	1 8 0	1 15 0	2 1 0
„ 110 „ 120 „	1 4 0	1 10 0	1 18 0	2 5 0
„ 120 „ 130 „	1 6 0	1 12 0	2 1 0	2 8 0
„ 130 „ 140 „	1 8 0	1 15 0	2 6 0	2 12 0
„ 140 „ 150 „	1 10 0	1 18 0	2 10 0	2 16 0
„ 150 „ 160 „	1 12 0	2 0 0	2 13 0	3 0 0
„ 160 „ 170 „	1 14 0	2 2 0	2 16 0	3 4 0
„ 170 „ 180 „	1 16 0	2 5 0	2 19 0	3 8 0
„ 180 „ 190 „	1 18 0	2 8 0	3 2 0	3 12 0
„ 190 „ 200 „	2 0 0	2 12 0	3 5 0	3 16 0

Officials.—Clerks to the Dock Com., Messrs. Long & Casley; Engineer, Thos. Miller; Harb. and Dock Master, E. Garwood; Coll. of Rates, E. H. Drummond; Assist. Coll., F. Page; Dock Traffic Supt., E. Hughes; Supt. of H. M. Cust., J. Hedges; Lloyd's Surv., E. Robertson.

Hotels.—“Great White Horse,” “Golden Lion,” “Crown and Anchor,” &c.

IRVINE, Ayrshire. On the coast, between Troon and Ardrossan. Lat. 53° 37' N; long. 4° 41' W. Pop. 8 520. Auth. Harbour Trust, under Irvine Harb. Act, 1873. P. NC. THW. f. and c. 11h 50m; Sp. rise 10ft; N. rise 8ft. D. on

Port St. Mary. A tidal harb., covered by a pier extending out for about a cable in a N. direction, and by an outer pier 1,000ft. long, extending in the same direction and terminating in 10ft water LWST. The harb. is quayed at the head and upon the W. side, and the passage into it between the pier head and the ledges from the shore is about 200ft wide. Area about 2 acres, over a bottom of mud and clay. Vessels of 12ft to 13ft dft. can enter on ST., and those of 8 to 9ft on N. W. prev. S. and W.; harb. affected by SE. to E. winds. LV., 200 tons reg. THW. f. and c. 11h 10m; ord. Sn. rise 22ft; N. 18ft. Charges same as Douglas. (d) **Castletown** (On C. Bay). A swing bridge divides this harb. into an inner and outer harb. The inner basin has an area of about 2 acres, the available width of entrance being 26ft. Vessels drawing 12ft can enter the outer harb. on ST., and those of 7ft on N. Depth at entrance to bay varies from 5 to 13 fathoms. THW. f. and c. 11h 10m. ST. rise 20ft; N. rise 16ft. Charges same as Douglas. (e) **Ramsey Harbour.** Formed by the outlets of the river Sulby; defended at entrance by two parallel piers. En. 50 yards wide. Vessels drawing 16ft may reach the quay on average ST., and those of 9ft on N. W. prev. S. and W. Harb. open to E. THW. in Ramsey Bay 11h. 12m; ST. rise 20½ft; N. 16ft. 600 yards south of the harb. entrance is an iron landing pier extending in an easterly direction 2,100ft, terminating in 12ft of water at LWST. Charges as at Douglas.

Officials.—Harb. Masters: C. B. Quane, Douglas; J. Morrison, Peel; H. Coole, Port Erin (see Port Erin); T. Qualtrough, Port St. Mary; J. Kewish, Castletown; T. Bryden, Ramsey.

ISLE OF WHITHORN.—See Whithorn.

ITCHENOR, a creek under port of Littlehampton. D. HWST. 14ft, HWNT. 10ft.

Official.—Principal Customs Officer, J. Wiltshire.

JARROW, on the River Tyne. The Mercantile Dry Dock, recently constructed, has a breadth of 73ft. Entrance 60ft. Length 350ft. Depth of water on sill 11WST. 21ft.

JERSEY.—See Channel Islands

JOHNSHAVEN, Kincardineshire, Scotland. Lat. 56° 47' N; long. 2° 21' W. Ry. N.B. THW. f. and c. 1h 30m. Auth. Owner, Hercules Scott, Esq., of Brotherton, Johnshaven, N.B., under Prov. Orders 1871 and 1882. W. prev. W. and NSW. and most dangerous SE. Accn. Outer harb. about ½ of an acre, inner harb. ½ an acre. D. Dry at LW., from 5 to 12ft at HW. Good quayage.

Charges.—3d per ton reg. Ballast 6d per ton, taking in or discharging. Master paying cartage over and above ballast dues. Windbound vessels 1½d per ton.

Pilotage.—NC., as per agreement.

Officials.—Harb. Master, Wm. Low; Berthing Master, J. Douglas.

Hotels.—"Anchor" and "Ship."

KAMES BAY, I. of Bute. Lat. 55° 53' N; long. 5° 3' W. Frequenting by yachts in the season. Good holding ground at moderate depths.

KATERLINE, Kincardineshire, Scot. Lat. 56° 33' N; long. 2° 14' W. A small harb., dry at LW. THW. f. and c. 1h 15m.

Charges.—Anchorage : vessels under 50 tons, $2/2$; 100 tons, $2/8\frac{1}{2}$; 150 tons, $3/3$; 200 tons, $4/4$; over 200 tons, $5/5$. Quayage, per ton $1\frac{1}{2}d$. Coals $3\frac{1}{2}d$. per ton.

Official.—Harb. Master, Hugh Finlay.

Hotel.—"Bangor Arms."

KILLYLEAGH, Strangford Lough, Ireland. **Auth.** The Earl of Dufferin. **Accn.** A quay dry at LW., and 10 to 15 ft HW.

KILMAKILLOGE, Kenmare Bay, Co. Kerry. Lat. $51^{\circ}48'N$; long. $9^{\circ}51'W$. Good anchorage in deep water.

KILMORE, Co. Wexford, Ireland, near the Saltees Islands, small harbour formed by a pier and a breakwater now in course of construction by the Irish Board of Works.

KILORGLIN, near Valentia, Ireland. Lat. $51^{\circ}56'N$ long. $10^{\circ}19'16''W$. **Auth.** The Grand Jury of Co. Kerry. A tidal pier, protected by a mud-bank.

KILRUSH, Co. Clare, Ireland. Lat. $52^{\circ}38'N$; long. $9^{\circ}30'W$. On the Shannon. **Auth.** The Kilrush Town Commrs. **Accn.** Harb. is formed by a pier, and is sheltered from all winds but W. **D.** at pierhead 8ft LW. Used by vessels of up to 200 tons.

KINCARDINE, Perthshire, Scot. Lat. $56^{\circ}5'N$ long. $3^{\circ}45'W$. **Auth.** Owner, Lady Wm. Osborne Elphinstone. **Accn.** Harb. formed by a pier 115 yards long. **D.** Dry at LW., 18ft HWST., and 12ft HWNT. **THW.** f. and c. 3h om. W. prev. NE. and SW., and most dangerous S.

Official.—Agent, Charles Brown. Harb. Master, J. Thompson.

KINGHOLM-ON-NITH, a sub-port of Dumfries. Harb. Master, G. Little.

KINGHORN, Fifeshire. Lat. $56^{\circ}5'N$; long. $3^{\circ}12'W$. A small harb. belonging to the N.B. Ry. Co.

Official.—Gen. Manager, J. Walker, Edinburgh.

KINGSBRIDGE, Devon, 32 miles SW. of Exeter. **D.** HWST. 14ft, HWNT. 9ft. Charges same as Salcombe.

KINGS LYNN.—See Lynn.

KINGSTON (Elgin).—See Garmouth.

KINGSTON, Sussex.—See Shoreham.

KINGSTON-UPON-HULL.—See Hull.

KINGSTOWN.—See Dublin. **THW.** f. and c. 11h 12m.

KINSALE (see Bandon Quay), Co. Cork. Lat. $51^{\circ}36'N$; long. $8^{\circ}31'38''W$. Situated at the mouth of the Bandon Ry. Terminus of Cork, Bandon & Kinsale Ry. **Auth.** Harb. Commrs., under Prov. Orders, 1870 and 1874. **Accn.** Harb. is formed by nature, and improved by the construction of a new pier and quay. **D.** at quays $8\frac{1}{2}ft$ at HW., at bar 13ft at LW., and inside harb. 4 to 5 fms. Vessels can now get alongside quay at all times. Cranes nil.

Charges.—1d per ton on reg. tonnage.

Officials.—Sec., M. Hegarty, Esq. ; Harb. Master, James Coleman ; Coll., J. Calgan.

Hotels.—"Kinsale Arms," "Commercial," and "Army and Navy."

KIPFORD.—See Barlochan.

KYLEAKIN, Inverness-shire. Lat. $57^{\circ} 16' 39''$ N; long. $5^{\circ} 44' 28''$ W. Auth. Owner, Lord Macdonald. Accn. A pier, dry at LW.; the basin has 15ft at LW. THW. f. and c. 6h 16m.

Official.—Factor, A. Macdonald.

KYLE RHEA, Inverness-shire. Lat. $57^{\circ} 17'$ N; long. $5^{\circ} 40'$ W. There is a good pier at this place.

LAMBAY ISLAND HARBOUR, Co. Dublin, Ireland. Lat. $53^{\circ} 30'$ N; long. $6^{\circ} 0'$ W.

LAMLASH, Arran Island, Hebrides. Lat. $55^{\circ} 31'$ N; long. $5^{\circ} 4'$ W. A good anchorage and excellent harb., but landing difficult at LW. There is a small pier at this place.

LANCASTER, Lancashire, 5 miles above Glasson Dock, on the river Lune, 12 miles from the sea. Lat. $54^{\circ} 3'$ W; long. $2^{\circ} 46'$ W. Pop. 20,000. Auth. Commissioners and Trustees of the Port of Lancaster. St. George's Quay, under Act 23 George II. and subsequent Statutes. P. C. THW. 11h 16m. D. at Lancaster ST. 12ft; NT. 6ft. W. prev. SW.; most dangerous from WNW. Rys. L. & NW. and M. Tr.—I. Timber, grain, Spanish ores, &c.; E. Coal and salt. LV. at *Glasson Dock* at HWST. about 600 reg. ton.; at *Morecambe* at HW. 560 reg. ton. *Glasson Dock*, the property of the Commissioners of the port of Lancaster, is 500ft long and 200ft wide, with an entrance 35ft wide; depth of water over sill at ST. 17 to 20ft; NT. 12 to 14ft. The lock connecting this with the Lancaster Canal is 100ft long by 26ft wide. There is a graving dock attached 197ft long (187ft on blocks), entrance 35ft wide. Outside the dock there is 400ft of quay wall, dry at LW., and in dock there is 1,000ft of quayage space. Steam cranes, coal tip, &c. *Morecambe Harb.*, property of the Midland Ry., has good warehouse and steam crange accommodation. LV. at HW. 560 tons reg. No vessel can enter at LWST. D. on bar at LW. 2ft 3in. W. prev. SW.; most dangerous NE.

Charges.—Harb. light and buoyage dues, 4d per ton. Foreign 9d to 1/ per ton. Ballast loading 1/ per ton, discharging 2d to 6d per ton.

Pilotage.—River Pilotage :—

River Pilotage.	Per Foot of the Vessel's Draught of Water.
	s. d.
•Within Line from Abbey Lower Lighthouse to Sunderland Point for or from Glasson :—	
Under 200 tons register	1 0
Do. 600 do.	1 6
Do. 1000 do.	2 0
For 1000 do. and above	3 0
Within Line from Abbey Lower Lighthouse to Sunderland Point for or from the Old or New Quay or Jetty at Lancaster or other place within the said line :—	
Under 8 feet draught	1 0
8 feet and under 10 draught	1 4
10 feet and upwards	2 0

For removing any vessel which on her passage to or from the Old Quay or Jetty at Lancaster shall stop and moor at the New Quay, 5/ extra.

Sea pilotage :—

On vessels employed in the "Oversea" Trade.

From	To or opposite	Per Foot of the Vessel's Draught of Water.							
		Under 200 Tons Register.	200 Tons and under 600 Tons Register.	600 Tons and under 1000 Tons Register.	1000 Tons Register and upwards.				
Within lines from Morecambe Bay Light Ship to Formby Point and Haverigg Point respectively....	Glasson Dock and <i>vice versa</i>	s.	d.	s.	d.	s.	d.	s.	d.
		6	0	3	0	9	0	10	0
Within a line with Blackcomb bearing NNE.....	Ditto	5	0	6	0	7	0	8	0
Danger Patch Buoy, or one mile outside No. 1 Buoy.....	Ditto	4	6	5	6	6	6	7	6
The Anchorage at Foot of Wyre or off No. 1 Buoy	Ditto	4	0	4	6	5	0	5	6
Within No. 3 Buoy and outside river limits.....	Ditto	2	0	2	6	3	0	4	0
Piel Anchorage.....	Ditto	5	6	6	6	7	6	8	6
Within lines from Morecambe Bay Light Ship.....	Piel Anchorage..	4	6	6	0	7	0	8	0

On Vessels employed in the "Coasting" Trade one-half of the above rates.

NOTE.—Masters of outward bound vessels may, at their option, dispense with the services of pilots at Danger Patch Buoy.

Towage.—Ships under 300 tons £6 6s; 400 tons £7 7s; 500 tons £8 8s; 600 tons £9 9s; 700 tons £10 10s; and every additional 100 tons £1 1s extra. From Glasson Dock to Lancaster or *vice versa*, 6d per ton; and 9d if towed up and down.

Officials.—Gen. Man. M. Ry., J. Noble, Derby; Gen. Man. L. & N.W. Ry., J. Findlay, London; Harb. Mast. *Lancaster and Glasson Dock*, A. Russell; Harb. Mast., *Morecambe*, J. M. Sibbald; Dock Mast., *Glasson*, W. N. Greenwood.

NOTE.—The Commissioners are rebuilding and extending the new quay at Lancaster. It will be completed early in 1890, and will extend for 500ft along the river front.

LAND'S END, Cornwall. THW. f. and c. 4h 30m.

LANGSTON HARBOUR, Portsmouth, Hants. There is abt 14ft on bar. Open to S. winds.

Official.—Quay Master, A. Little.

LARGO, Wiltshire. Lat. 56° 13' N; long. 2° 56' W. The birthplace of Alex. Selkirk (Robinson Crusoe). Ry.

NB. Auth. Owner, Geo. Johnston, Esq., of Largo. Accn. A pier carried out to half tide; D. 4ft LW. Used by coasters loading potatoes and linseed cake. W. prev. E. and N., most dangerous E. THW. f. and c. 2h 20m.

Charges.—Dues 6d to 1/ per ton. Cargo 1d to 6d per ton.

Officials.—Agent, C. Gulland; Harb. Master, H. Guthrie.

Hotel.—"Robinson Crusoe."

LARGS, Argyshire. Lat. 55° 50' N; long. 4° 50' W. Rys. Glasgow & SW., and Caledonian. A small harb. used by passenger steamers and coasters up to about 90 tons. D.

at LW. 3ft. Auth. Joint Stock Co., under Act 2 William IV., c. 44. THW. f. and c. 11h 55m.

Charges.—2d per ton on all vessels over 20 tons.

Officials.—Sec., J. Boyd; Harb. Master, R. Wright.

LARNE, Co. Antrim. Lat. $54^{\circ} 51' N$; long. $5^{\circ} 47' W$. **Rys.** Belfast and Northern Counties, and Ballymena and Larne. Auth. Owner, J. Chaine, Esq., under Prov. Order, confirmed by the Pier and Harbours Confirmation Act, 1871 and 1888. THW. f. and c. 10h 40m. Accn. A pier harb.; piers carried out to 18ft LW., and 26ft HW. Crane power to 10 tons. LV. 3,986 tons. W. prev. W., most dangerous E. to SE.

Charges.—Home 4d per ton, foreign 6d. Rates on goods as per schedule.

Official.—Harb. Master, Wm. Dalton.

Hotel.—“Oldfleet Hotel Co., Ltd.”

LAUGHARNE (Barks-under-Clyffe), Towy River, Carmarthenshire. Lat. about $51^{\circ} 22' N$; long. $4^{\circ} 20' W$. A harb. used by small colliers. W. prev. SW. No harb. authority. THW. f. and c. about 5h 45m.

Official.—The Recorder, David Wilkin.

LEIGH, Essex. River Thames. A fishing harb., 17 miles SE. of Chelmsford.

Official.—Principal Coast Officer, F. Harris.

LEITH, Midlothian. On the Water of Leith, adjoining Edinburgh. Lat. $55^{\circ} 59' N$; long. $3^{\circ} 10' W$. Pop. 78,000. Auth. Commissioners, under Docks Act, 1875. P. NC. THW. f. and c. 2h 17m; Sp. rise 16½ft; N. rise 12½ft; R. of N. 9ft. D. on bar 10ft LWST. W. prev. W. **Rys.** Cal. and N.B. Tr.—I. Grain, hemp, provisions, cattle, esparto, fibre, ores, timber, manure, wines, sugar, fruit, &c.; E. Iron, hardware, coal, canvas, machinery, chemicals, fire-bricks, manures, herrings, spirits, ales, &c. LV. *Mentmore*, 2,230 tons. The En. to the harb. and docks between the two piers is 77yds wide. Accn. Area of harb. and docks:—

	Area.	Depth of water HW. Equinoctial ST.	
	Acres.	ft.	in.
Harbour	14	{	26 6
Inner Harbour	7		18 6
Old Docks	10	15 to 18	0
Victoria Dock	5		18 6
Albert „	11		24 6
Edinburgh „	17		26 6
Total	64		

In addition there is the entrance channel, sometimes designated “harbour” between the piers; this portion is not used for vessels lying to discharge cargo, but simply as an entrance to the docks and harb. Dry Docks, &c. :—

Name.	Length.	Width.	Depth of Water on Sil OHW.	
	ft.	ft.	ft.	in.
Prince of Wales' Dry Dock	382	70	20	6
Edinburgh „	300	40	17	0
Commercial „	266	36	15	0
Menzies' Upper „	164	35	12	0
„ Lower „	174	35	10	6
Sandport Street „	180	31	10	6

Limits.	60 Tons and upwards to 100 Tons.	100 Tons and upwards to 220 Tons.	220 Tons and upwards to 420 Tons.
	£ s. d.	£ s. d.	£ s. d.
1st.—From five miles seaward of Hoy Head through Hoy Sound to anchorage in Stromness Harb. or Kerston Roads, and out again to sea by Hoy Sound	1 5 0	1 15 0	2 12 6
2nd.—From sea through Hoy Sound to anchorage in Stromness Harb. or Kerston Roads, and out again to sea by Long Hope, and <i>vice versa</i>	1 5 0	2 2 0	3 0 0
3rd.—From sea through Hoy Sound to anchorage in Stromness Harb. or Kerston Roads, and out again to Sea by Long Hope and Pentland Frith, and <i>vice versa</i>	1 11 6	2 5 0	3 10 0
4th.—From sea through Hoy Sound to anchorage in Stromness Harb. or Kerston Roads, and out again to sea by Holm Sound, and <i>vice versa</i>	1 8 0	2 0 0	3 0 0

Towage.—

And 3/ every 20 tons additional. From ports E. of Leith, 10/ extra Harbour Towage. Inwards, 2½d per reg. ton; outwards, 2d. per ton. Second boat, 1d per reg. ton. From Leith, clear of Inchkeith, 2½d per ton. No difference for ships in ballast. Distance money as per agreement. The steam tug owners will not be responsible for any damage while towing.

Officials.—Clerk to Commrs., J. Torry; Gen. Supt. of harb. and docks, P. Whyte, M.I.C.E.; Coll. of dues, J. T. Carmichael; Dock Master, G. Rose; Coll. of H.M. Cust., G. Conolly; Board of Trade Surv., G. Carlisle.

LERWICK, Shetland Isles. Lat. 60° 10' N; long. 1° 8' W. **Pop.** about 5,000. **Auth.** Harbour Trustees. **P.** NC. **THW.** 10h 30m; Sp. rise 6ft; N. rise 4ft. **D.** in harb. or bay, ST. varying throughout from 10 to 60ft; NT. 4 to 54ft. **Tr.** - I. Fish curing stock, ice, timber; E. Fish. **Accn.** Harb. is a capacious landlocked bay on the W. side of Brasseys Sound. A new deep water pier is now open for traffic; 12ft of water at LWST.

Pilotage.—District not defined. Rates as per agreement.

Officials.—Clerks to Commrs., Sievwright & Macgregor ; Harb. Master, George Allison ; Coll. of Cust., Receiver of Wreck, and Supt. of Mercantile Marine, J. Dodsworth ; Registrar of R.N.R., Coastguard Officer and Drill Supt. R.N.R., T. Johnstone.

LEVEN, Fifeshire, at the mouth of the Leven. **D. HWST.**
12ft. **HWNT.** 8ft.

LIMEKILNS, Fifeshire, a sub-port of Bo'ness. D. at HWST. 13ft and HWNT. 8ft.

Lat. 52° 40' N; long. 8° 37' W. Pop. 48,3co. Auth.

Harbour Commissioners, under Act 1867. P. NC. THW. 6h
1cm; Sp. rise 18 $\frac{1}{2}$ ft; N. rise 13 $\frac{1}{2}$ ft. W. prev. NW. and NE.
Rys. G.S. & W., W. & L., L & E.L. & F. Tr.—I. Manu-
factured goods, coal, iron, tea, sugar, tobacco, wine, and timber;
E. Corn, provisions, and agricultural produce. LV. 1,483 tons.
Accn. Harb. is about 1,600yds long, and 150yds wide. Docks, &c.:—

Name.	Length.	Width.	Depth on Sill at OHW.	
			ST.	N.
Floating Dock	ft. 810	ft. 70(En.)	ft. 23	ft. 18
Graving Dock	428	45	17	—
*Patent Slip	500	30	Rise of 19	Tides 14

Good warehouse accn. ; hand cranes up to 7 tons.

Pilotage.—District. From quays and docks of Limerick to Loop Head and Kerry Head, at mouth of the river Shannon. **Rates:—**

Registered Tonnage.		Between Scattery and Limerick.						Between Scattery and Kilcredane.			Between Kilcredane and Kilcloher Head.			Between Kilcloher and Loop Head.		
Exceeding	Not Exceeding	Inwards.			Outwards.											
					With Cargo.			Ballast.								
Tons.	Tons.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
	100	1	10	0	1	10	0	1	10	0	1	0	0	0	13	4
100	150	1	13	0	1	13	0	1	13	0	1	0	0	0	13	4
150	200	1	16	0	1	16	0	1	16	0	1	0	0	0	13	4
200	250	2	11	0	2	11	0	2	11	0	1	0	0	0	13	4
250	300	3	0	0	3	0	0	3	0	0	1	0	0	0	13	4
300	350	3	6	0	3	6	0	3	0	0	1	1	3	0	14	2
350	400	4	1	0	4	1	0	3	0	0	1	2	6	0	15	0
400	450	4	7	0	4	7	0	3	0	0	1	3	9	0	15	10
450	500	4	13	0	4	13	0	3	2	0	1	5	0	0	16	8
500	550	5	5	0	5	5	0	3	10	0	1	6	3	0	17	6

Rates—continued.

Tons.	Tons.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
550	600	5	8	0	5	8	0	3	12	0	1	7	6	0	18	4
600	650	5	11	0	5	11	0	3	14	0	1	8	9	0	19	2
650	700	5	14	0	5	14	0	3	16	0	1	10	0	1	0	0
700	750	5	17	0	5	17	0	3	18	0	1	11	3	1	0	10
750	800	6	0	0	6	0	0	4	0	0	1	12	6	1	1	8
800	850	6	1	6	6	1	6	4	1	0	1	13	9	1	2	6
850	900	6	3	0	6	3	0	4	2	0	1	15	0	1	3	4
900	950	6	4	6	6	4	6	4	3	0	1	16	3	1	4	2
950	1,000	6	6	0	6	6	0	4	4	0	1	17	6	1	5	0
1,000	1,050	6	7	6	6	7	6	4	5	0	1	18	9	1	5	10
1,050	1,100	6	9	0	6	9	0	4	6	0	2	0	0	1	6	8
1,100	1,200	6	15	0	6	15	0	4	10	0	2	2	6	1	8	4
1,200	1,300	7	1	0	7	1	0	4	14	0	2	5	0	1	10	0
1,300	1,400	7	7	0	7	7	0	4	18	0	2	7	6	1	11	8
1,400	1,500	7	13	0	7	13	0	5	2	0	2	10	0	1	13	4
1,500	1,600	7	19	0	7	19	0	5	6	0	2	12	6	1	15	0
1,600	1,700	8	5	0	8	5	0	5	10	0	2	15	0	1	16	8
1,700	1,800	8	11	0	8	11	0	5	14	0	2	17	6	1	18	4
1,800	1,900	8	17	0	8	17	0	5	18	0	3	0	0	2	0	0
1,900	2,000	9	3	0	9	3	0	6	2	0	3	2	6	2	1	8

Rates for Clare. From sea to mouth of Clare River, or from Limerick to mouth of Clare River, Scatterry rates; from Foynes to Smith's Island or from Smith's Island to Clare Quay, and *vice versa*, two-thirds Scatterry rates; from Foynes to Clare Quay, Scatterry rates.

Towage.—

Reg. Tonnage, &c.		Grass Island, 9 miles.	Beigh Castle, 18 miles.	Foynes, 27 miles.	Tarbert, 36 miles.	Kilrush, 45 miles.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Under 50 tons	{ loaded	1 15 0	3 0 0	4 10 0	6 15 0	8 15 0
	{ ballast	1 8 0	2 12 0	4 2 0	6 8 0	8 8 0
50 & un. 100	{ loaded	2 16 0	4 8 0	6 2 0	8 4 0	10 6 0
	{ ballast	2 2 0	3 12 0	5 8 0	7 10 0	9 12 0
100 „ 150	{ loaded	3 10 0	5 8 0	7 6 0	9 4 0	11 2 0
	{ ballast	2 16 0	4 14 0	6 12 0	8 10 0	10 8 0
150 „ 200	{ loaded	4 4 0	6 8 0	8 12 0	10 16 0	13 0 0
	{ ballast	3 10 0	5 0 0	7 4 0	9 8 0	11 12 0
200 „ 250	{ loaded	4 18 0	7 8 0	9 18 0	12 8 0	14 18 0
	{ ballast	4 4 0	6 0 0	8 10 0	11 0 0	13 10 0
250 „ 300	{ loaded	5 12 0	8 8 0	11 4 0	14 0 0	16 16 0
	{ ballast	4 14 0	7 0 0	9 16 0	12 12 0	15 8 0
300 „ 350	{ loaded	6 6 0	9 6 0	12 6 0	15 6 0	18 6 0
	{ ballast	4 18 0	7 18 0	10 18 0	13 18 0	16 18 0
350 „ 400	{ loaded	7 0 0	10 4 0	13 8 0	16 12 0	19 16 0
	{ ballast	5 12 0	8 16 0	12 0 0	15 4 0	18 8 0
400 „ 450	{ loaded	7 14 0	11 1 0	14 8 0	17 14 0	12 2 0
	{ ballast	6 6 0	9 13 0	13 0 0	16 6 0	19 14 0
450 „ 500	{ loaded	8 8 0	11 18 0	15 8 0	18 18 0	22 8 0
	{ ballast	7 0 0	10 10 0	14 0 0	17 10 0	21 0 0
500 „ 550	{ loaded	9 2 0	12 14 0	16 6 0	19 18 0	23 10 0
	{ ballast	7 14 0	11 6 0	14 18 0	18 10 0	22 2 0
550 „ 600	{ loaded	9 16 0	13 10 0	17 4 0	20 18 0	24 12 0
	{ ballast	8 8 0	12 2 0	15 16 0	19 10 0	23 4 0
600 „ 650	{ loaded	10 10 0	14 6 0	18 2 0	21 18 0	25 14 0
	{ ballast	9 2 0	12 18 0	16 14 0	20 10 0	24 6 0
650 „ 700	{ loaded	11 4 0	15 2 0	19 0 0	22 18 0	26 14 0
	{ ballast	9 16 0	13 14 0	17 12 0	21 10 0	24 6 0
700 „ 750	{ loaded	11 18 0	15 18 0	9 18 0	23 18 0	27 17 0
	{ ballast	10 10 0	14 10 0	18 10 0	22 10 0	26 10 0
750 „ 800	{ loaded	12 12 0	16 14 0	20 16 0	24 18 0	29 0 0
	{ ballast	11 4 0	15 6 0	19 8 0	23 10 0	27 12 0
800 „ 850	{ loaded	13 6 0	17 10 0	21 14 0	25 18 0	30 2 0
	{ ballast	11 18 0	16 2 0	20 6 0	24 10 0	28 14 0

Officials.—Harb. and Dock Master, M. Fitzmaurice; Coll. of H.M. Cust., C. Heyward.

LITTLEFERRY, Sutherlandshire. Lat. $57^{\circ} 56' N$; long. $4^{\circ} 0' W$. **Auth.** Owner, Duke of Sutherland, under Act 11 and 12 Vict., c. 99. A small harb. with about 5ft at LW. Used by coasters up to 140 tons. **W.** prev. **W.** to **SW.**, most dangerous **ENE.** to **ESE.** **THW.** f. and c. 11h 42m.

Officials.—Factor, D. McLean, of Golspie.

LITTLEHAMPTON, Sussex. On the Arun. Lat. $50^{\circ} 48' N$; long. $0^{\circ} 32' W$. **Pop.** 4,000. **Auth.** Arundel Harbour Commissioners, under Acts of Parliament Geo. III. and IV. **P. C.** **THW.** 11h 20m.; **Sp.** rise $16\frac{1}{2}$ ft; **N.** rise $12\frac{1}{2}$ ft. **D.** on bar at LW. nearly dry; general depths over bar are $16\frac{1}{2}$ ft **OHWS.**, and 12ft at **N.** **W.** prev. **SW.** **Ry.** **L.B. & S.C.** **Tr.**—**I.** Wood, coal, slate, cement, corn; **E.** Hoops, timber, &c. **LV.** *William Miles*, 574 reg. tons. **Accn.** Berths of soft level mud; harb. easy of access in all weathers. Messrs. Harvey & Co.'s Patent Slip is 300ft long, 40ft wide, with a depth at **ST.** of $16\frac{1}{2}$ ft, and **NT.** $12\frac{1}{2}$ ft, capable of taking in vessels of 400 reg. ton. Cranes to lift 5 tons by arrangement with Railway Co.

Charges.—Harb. dues, coasting vessels 2d reg. ton; from foreign ports 5d ton. Ballast 1/ ton.

Pilotage. **District.** Undefined. **Rates.** 2d per ton inward and 1d outwards, but if vessel goes beyond Ford then one-half more than the above charges.

Towage.—4d reg. ton in and out.

Officials.—Harb. Master and Coll. of Dues, W. Sewell; Acting Coll. of H.M. Cust., W. Scovell; Station Supt. and Wharfinger, E. Briggs; Town Clerk, A. Shelley.

Hotels.—"Terminus," "Norfolk," "Beach," "Marine," and "Grand."

LITTLESTOKE, Somerset. Bristol Channel. No authority. A pier, 200yds long, used by coasters of about 40 tons.

LIVERPOOL. On the Mersey. Lat. $53^{\circ} 24' 57'' N$; long. $3^{\circ} 12' 1'' W$. **Pop.** 600,000. **Auth.** Mersey Docks and Harbour Board, under Act 5 and 6 Vict., c. 110, Mersey Docks and Harb. Act, 1857, Mersey Dock Acts Consolidation Act, 1858. **P. C.** **THW.** f. and c. 11h 23m; **Sp.** rise 27ft 10 $\frac{1}{2}$ in; **N.** rise 13ft. The area of anchorage for large ships on the Mersey is about 2,000 acres, and for small boats about 500 additional acres. The approach to this anchorage is by the bar of the Mersey, the depth varying from 11ft at **LWST.** to 40ft at **HWST.** The length of quay walls on the river sides outside the docks is 8 miles. **W.** prev. are from two opposite quarters, viz., **NW.** and **SE.**, about equal in days throughout the year. **SE.** winds are off shore, and bring fog, but otherwise generally harmless. **NW.** winds make a lee shore, and may become dangerous. **Rys.** **C.L.C.**, **G.W.**, **L. & Y.**, **L. & N.W.**, **M.** **Tr.** The second port in magnitude in the U.K. No vessels enter at **LWST.** Vessels are docked only during the time between two hours before **HW.** and one hour after.

The datum of the table is the level of "Old Dock Sill"—High Water levels of Springs and Neaps referred to above are 19ft 0 $\frac{1}{2}$ in, and 11ft 7in respectively above datum.

Name.	Width of Entrance.	Sill below Datum.	Water Area.	Lineal Quayage.
	ft. in.	ft. in.	acres. yds.	miles. yds.
Hornby Dock	S 50 0	12 0	16 3,769	0 1,430
„ Branch	S 50 0	ODS.	0 3,354	0 308
Alexandra	South { E 60 0	12 0	17 4,055	0 1,085
	W 60 0	12 0		
Alexandra Branch, No. 3	—	—	7 3,420	0 846
„ „ No. 2	—	—	9 2,657	0 1,024
„ „ No. 1	—	—	9 573	0 983
Langton	SE 50 0	9 0	18 589	0 1,322
„ Lock (238 ft. long) S'th	W 65 0	12 0	0 1,719	0 160
„ „ (119 ft. long) „	E 65 0	12 0	0 860	0 81
„ Branch	60 0	12 0	2 4,549	0 671
Brocklebank	S 80 0	7 9	11 1,010	0 1,002
„ „ „ „ „	S 60 0	7 9	—	—
„ Lock (110 ft. long) „	N 32 0	6 0	—	—
„ „ „ „ „	M 20 0	6 0	—	—
North Carriers'	W 40 0	6 0	2 3,423	0 641
South Carriers'	W 40 0	6 0	1 4,515	0 615
Canada Lock (498 ft. long)....	N 100 0	7 9	1 3,479	0 487
„ Dock	South E 50 0	6 6	17 4,043	0 1,272
„ „ „ „ „	W 80 0	6 6	—	—
Huskisson	—	—	14 3,451	0 939
„ Branch (No. 2)	—	—	8 730	0 890
„ „ (No. 1)	—	—	7 592	0 910
„ Lock (338 ft. long) ..	SE 80 0	6 6	0 4,682	0 342
„ „ 363 „ ..	W 45 0	6 0	0 3,650	0 330
Sandon	W 70 0	6 6	10 100	0 867
Wellington Half-tide .. North	E 70 0	6 9	3 813	0 400
„ „ „ „ „	W 50 0	6 6	—	—
„ Dock	W 70 0	6 6	7 4,120	0 820
Bramley-Moor:	N 60 0	6 0	9 3,106	0 935
„ „ „ „ „	S 60 0	6 0	—	—
Nelson	S 60 0	6 6	7 4,786	0 803
Canal Basin, Lightbody St. ..	W 18 0	ab've ODS	0 920	0 110
Stanley Lock	W 18 0	2 6*	—	—
Collingwood Lock	W 18 0	2 6	—	—
Salisbury Lock	W 18 0	—	—	—
„ „ Inner Sill ..	—	2 6	—	—
„ „ „ „ „	—	bel'w ODS	—	—
„ „ Outer „ ..	—	5 0	—	—
Stanley Dock	W 51 0	5 8	7 120	0 753
Collingwood	W 60 0	6 9	5 244	0 553
Salisbury	West N 60 0	6 11	3 2,146	0 406
„ „ „ „ „	S 50 0	6 11	—	—
Clarence Graving Dock Basin	N 45 0	4 9	1 1,056	0 291
„ „ „ „ „	S 44 6	4 6	—	—
„ Half-tide	W 50 0	5 0	4 1,794	0 635
„ Dock	W 47 0	3 2	6 273	0 914
Trafalgar Lock	N 45 0	6 7	0 2,937	0 256
„ Dock	N 44 3	6 7	5 4,546	0 764
Victoria	N 45 0	4 11	5 3,559	0 755
„ „ „ „ „	S 50 0	6 6	—	—
West Waterloo	S 60 0	8 0	3 2,146	0 533
East „ „ „ „ „	S 60 0	8 0	2 3,375	0 506
Prince's Half-tide Dock West	N 65 0	8 0	4 3,250	0 429
„ Lock (110 ft. long) „	M 32 0	8 0	—	—
„ „ „ „ „	S 65 0	8 0	—	—
Prince's Dock	N 45 0	5 11	11 1,490	0 1,178
George's	—	—	5 154	0 645
„ Dock Passage	{ N 36 0	{ 4 6	0 2,439	0 356
	{ S 40 3	{		
Manchester	W 32 10	0 3*	1 595	0 339
„ „ „ „ „	—	bel'w ODS	—	—
„ Lock (86 ft. long) ..	W 33 8	3 9	0 315	0 51
Canning Dock	W 45 0	6 1	4 376	0 585
„ Half-Tide	West N 45 0	6 3	2 2,688	0 429
„ „ „ „ „	S 45 0	6 3	—	—

		ft.	in.	ft.	in.	acres.	yds.	miles.	yds.
Albert	N	45	0	6	4	7	3,542	0	885
"	E	45	0	6	0	—	—	—	—
Salthouse	N	45	0	6	0	6	2,019	0	784
Wapping Basin	N	50	0	5	8	1	3,151	0	454
"	S	50	0	6	0	—	—	—	—
"	W	40	0	6	0	—	—	—	—
" Dock	W	50	0	6	0	5	499	0	815
"	S	50	0	6	0	—	—	—	—
King's Dock	S	42	0	5	0	7	3,896	0	875
Queen's Half-tide	N	70	0	6	9	3	3,542	0	445
"	S	50	0	6	9	—	—	—	—
Trafford Dock and Lock	O	30	0	O.D.S.	0 3*	0	4,102	0	419
Queen's Dock	W	50	0	O.D.S.	1 3*	10	1,564	0	1,214
"	S	60	0	6	6	—	—	—	—
Coburg	W	70	0	6	0	8	26	0	1,053
Branch Dock, E. of Brunswick)	W	25	0	1	0	0	4,635	0	450
Dk.(less R'way Co.'s portion))									
Brunswick	N	60	0	6	6	12	3,364	0	1,074
"	W	41	0	5	6	—	—	—	—
" Half-tide	W	45	0	6	0	1	3,388	0	491
Toxteth Dock	S	60	0	12	0	11	1,975	0	1,134
" Lock (177 ft. long) ..	W	50	0	8	0	0	1,013	0	118
Harrington Dock	S	60	0	12	0	9	256	0	1,023
" Lock (131 ft. long) ..	W	22	0	5	9	0	320	—	—
Herculaneum	N	80	0	12	0	7	2,581	0	596
"	S	60	0	12	0	—	—	—	—
" Branch	—	—	—	—	—	2	853	0	577
Total Water Area and Quay Space of the)						362	3,925	24	185
Liverpool Docks									

* Sill above Datum.

The water in the group of Docks from George's to Brunswick inclusive can be impounded over L.W.N.T., and any loss made good by pumping from the river. Thus the effective depth of these Docks is made not less than that of the lowest sills, over which they can be approached, viz., 12ft below Datum.

Birkenhead Docks:—

Name.	Width of Entrance.	Sill below Datum.	Water Area.	Lineal Quayage.
	ft. in.	ft. in.	acres. yds.	miles. yds.
West Float	E 100 0	7 6	52 319	2 210
Basin near Canada Works ..	W 50 0	—	1 2,554	0 543
"	E 50 0	—	1 84	0 390
East Float	—	—	59 3,786	1 1,506
Corn Warehouse Dock	S 30 0	O.D.S.	1 453	0 555
Railway Companies' Basin	—	—	0 606	0 113
Wallasey Dock	—	below	12 3,813	0 1,261
Passage to ditto	W 49 2	9 0	0 1,333	0 234
Inner Northern Entrances	N 100 0	9 0	—	0 242
Lock, 198 ft. long	M 30 0	—	0 667	0 264
Inner sill	—	9 0	—	—
Outer sills	—	12 0	—	—
Lock, 274 ft. long	S 50 0	—	0 1,522	0 300
Inner sill	—	9 0	—	—
Outer sills	—	12 0	—	—
Alfred Dock	—	—	8 2,922	0 482
Outer Northern Entrances :				
Lock, 348 ft. long	N 100 0	12 0	0 3,888	0 352
Lock, 198 ft. long	M 30 0	12 0	0 667	0 377
Lock, 398 ft. long	S 50 0	12 0	0 2,222	0 301
Egerton Dock	W 70 0	7 4	3 4,011	0 754
Morpeth Dock	W 70 0	5 5	11 2,404	0 1,299
Railway Company's Basin	S 25 0	O.D.S.	0 3,144	0 319
Morpeth Branch Dock	W 85 0	—	4 243	0 637
Morpeth Lock, 398 ft. long	E 85 0	12 0	0 3,777	0 441
Total Water Area and Quay Space of the			159 4,535	9 110
Birkenhead Docks				

Summary :—

Name.	Water Area.		Quayage.	
	acres.	yds.	miles.	yds.
Liverpool Docks.....	362	3,925	24	135
Birkenhead Docks.....	159	4,535	9	110
Total	522	3,620	33	295

There are twenty-three Graving Docks—viz., Liverpool :—

Name.	Position and Width of Entrance.	Sill below Datum.		Coping at Hollow Quoins above Datum.	Length of Floor.		Total Length of Floor.
		ft.	in.		ft.	in.	
Langton No. 1 S.	Outer ...	60	0	6 0	27	0	448 0
	Inner ...	60	0	6 0	22	0	500 0
" " 2 N.	Outer ...	60	0	6 0	27	0	500 0
	Inner ...	60	0	6 0	22	0	448 0
Huskinson Lock.....	...	80	0	6 6	26	0	1,896 0
Sandon " " " No. 1	East.....	60	0	3 6	26	0	395 0
" " " " 2	" " " "	70	0	3 6	26	0	565 0
" " " " 3	" " " "	60	0	3 6	26	0	565 0
" " " " 4	" " " "	70	0	3 6	26	0	565 0
" " " " 5	" " " "	45	0	3 6	26	0	565 0
" " " " 6	West ...	45	0	3 6	26	0	565 0
Clarence " " " No. 1 N.	Outer ...	45	0	3 0	26	6	3,390 0
	Inner ...	45	0	0 6	18	0	451 0
" " " " 2 S.	Outer ...	45	0	3 0	26	6	289 0
	Inner ...	32	10	0 6	18	0	454 0
Prince's " " " " " "	...	45	0	5 9	28	2	286 0
Canning " " " " " " No. 1	North ...	35	9	O.D.S.	23	3	1,480 0
" " " " " " 2	South ...	35	9	O.D.S.	23	3½	277 4
Queen's " " " " " " No. 1	East.....	42	0	1 8½	27	7½	913 0
" " " " " " 2	West ...	70	0	3 6	27	5	465 0
Brunswick " " " " " " No. 1	East.....	42	0	2 6	26	6	467 0
" " " " " " 2	West ...	42	6	2 6	26	6	460 0
Herculaneum, No. 1	West ...	60	0	4 0	26	0	462 0
" " " " 2	Middle...	60	0	4 0	26	0	758 6
" " " " 3	East.....	60	0	4 0	26	0	753 0
							768 0
							2,279 6

Total length of floor of the Liverpool Graving Docks 12,489 10

* Sill above Datum.

NOTE.—The depth of water over the sills of the Sandon Graving Docks can be increased to any desired extent by pumping into the Sandon Dock from the river, so as to allow deep-draughted vessels to enter at low neap tides.

Birkenhead :—

Name.	Position and Width of Entrance.		Sill below Datum.	Coping at Hollow Quoins above Datum.	Length of Floor.	Total Length of Floor.
		ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
West Float ...No. 1	East.....	60 0	4 9	25 0	930 0	
" ... ,, 2	Middle...	48 4	7 9	25 0	750 0	
" ... ,, 3	West ...	85 0	7 9	25 0	750 0	
						2,430 0
Total length of floor of the Birkenhead Graving Docks						2,430 0
" " Liverpool " "						12,489 10
Total						14,919 10

The warehouse accommodation is extensive, and every modern appliance for dealing with the largest ships of the world and their cargoes is provided.

Charges.—On vessels entering the docks, dock tonnage rates ; not entering the docks, harb. rates, with wharf rates if piers, landing stages, or quays be used. On goods, if imported or exported, foreign, dock rates and town dues ; if coastwise, town dues only.

Pilotage.—**District.** Compulsory inward pilotage extends from the Middle Mouse, on the coast of Anglesea, to the river Mersey ; and compulsory outward pilotage from the Mersey to the fairway buoys of the sea channels of the Mersey. **Rates.** Inwards:—From Middle Mouse Island, on the true bearing of south, or from any point between the Middle Mouse and Great Orme Head Lighthouse on the same bearing 9/ ; from Great Orme Head Lighthouse on the true bearing of south, or from any point between the Great Orme Head Lighthouse on the above bearing and the Queen's Channel bar 8/ foot. Outwards:—To the bar light vessel, if the vessel proceeds through the Queen's Channel, or to the north-west buoy of Hoyle, if the vessel proceeds through the Rock Channel, 4/ foot ; coasting vessels pay one-half of the above rates in proportion for every half-foot, but no allowance is made for any dft. above or under half a foot, and no vessel shall pay for less than 8ft ; from any point between Middle Mouse and Ormes Head to Liverpool 9/* inwards ; from any point between Middle Mouse and Ormes Head to Beaumaris or Holyhead 10/ ; from any point between Middle Mouse and Ormes Head to Lancaster Sound or Pile a Foudre 13/ ; from Ormes Head to Liverpool 8/* , from Liverpool to bar lightship or Horse Channel, fairway buoy 4/* outwards ; to river Dee 8/ ; to Lancaster Sound, Pile a Foudre, or Beaumaris 10/ ; to Ormes Head 8/ ; to Point Lynas or Isle of Man 9/ ; to Holyhead 11/6 ; to Tuskar, Bristol Channel, Clyde, or Belfast 14/ ; to Start Point 19/ ; to Dungeness 24/ ; Liverpool, trial trip, not farther than NW. lightship and back 8/* foot ; coasting vessels one-half the above rates ; every additional foot and every half foot charged proportionately, but no allowance made for anything under half a foot. All vessels drawing less than 8ft to be charged the 8ft rate. **Transporting Rates and other Pilotage Charges :—**For a vessel of any dft., from any dock in Liverpool or

* The rates marked * are compulsory.

Birkenhead, or river, to any other dock in Liverpool or Birkenhead, or river 20/; ditto, Garston, or *vice versa* 40/; ditto, any landing-stage or pier and back to river or dock 20/. If the services of a pilot be required on board a vessel while at anchor in the river Mersey, day 5/. If a pilot be carried away under circumstances of unavoidable necessity, he shall be allowed 10/6 day for every day and part of a day until he can return to duty; and if he be landed to find his way back to Liverpool, from any of the undermentioned places, or if he be sent to a vessel at any of the said places, he is to be allowed travelling expenses as follows—viz., to or from Mostyn or any place on the western shore of the river Dee, or Fleetwood 10/; for any greater distance not further than from Holyhead or Pile a Foudre 20/; ditto Dublin 30/; ditto Glasgow, Belfast, Waterford, or Bristol Channel 40/; ditto Queenstown or Londonderry 50/. All inward-bound ships, except coasting vessels in ballast or under 100 tons register, are subject to compulsory pilotage, and must display a signal for a pilot on coming within the limits of the outer pilot station, viz., when the Middle Mouse bears S. by W. $\frac{3}{4}$ W. by compass, under a penalty of £5, and must take a pilot from the first pilot boat which shall display the usual signal offering a pilot, under a penalty of double pilotage in each instance of omission to take a pilot when offered. Outward-bound ships liable to compulsory pilotage must take the first pilot who offers.

Towage.—

Ship's Tonnage.	Direct to Bell Buoy.	Orme's Head.	Point Lynas.	Skerries.	Holyhead.	Bardsey.	Tuskar.
	£	£	£	£	£	£	£
150 to 200 ..	5	10	14	17	20	28	40
200 „ 300 ..	6	11	15	18	21	30	45
300 „ 400 ..	7	12	16	19	22	32	48
400 „ 600 ..	8	14	18	22	26	38	55
600 „ 700 ..	9	15	20	24	28	42	60
800 „ 1,000 ..	10	17	22	27	32	46	65
1,000 „ 1,300 ..	12	20	25	30	35	52	75
1,300 „ 1,600 ..	13	21	28	33	38	56	80
1,600 „ 2,000 ..	14	23	30	36	42	62	90
2,000 & upwards	15	25	33	40	47	70	100

Extra towage for vessels over 800 tons 50/, and under 800, 40/ per hour. **River Towage:—**

From.	Pier to River.	Pier to Pier.	River to Pier.
Tons.	£ s. d.	£ s. d.	£ s. d.
150 to 200	2 0 0	2 0 0	2 0 0
200 „ 300	2 0 0	3 0 0	3 0 0
300 „ 500	3 0 0	4 0 0	5 0 0
500 „ 1,000	4 0 0	5 0 0	6 0 0
1,000 „ 1,200	5 0 0	6 0 0	7 0 0
Upwards	5 0 0	6 0 0	8 0 0

River to Garston, under 200 tons £4; under 400, £5; under 800, £8; over 800, £10. From south of Tranmere Slip to any pier north of Prince's Dock Basin £3 extra; from any part of the river to Brunswick Pier £2 extra. These extra charges apply to vessels over 800 tons; for vessels under 800 tons £1. Hanging-on in river.—Vessels under 700 tons 30/ hour; above 700 tons 40/ hour. Attendance on vessels clearing anchors.—Over 800 tons 50/; under 800, 40/ hour. On ships.—For the first three hours £2 hour, and 30/ hour for any number of hours beyond the first three. If em-

Charges.—Dues 1d ton on all goods, and 1d package as per tariff. Buoyage dues 1d reg. ton; light dues $\frac{1}{4}$ d ton.

Pilotage.—District. All vessels bound in over Burry Bar shall hoist a pilot signal immediately they pass a line drawn from the Helwick Lightship to Caldy Light. No definite marks laid down. No pilots are to quit the vessels under their charge until the Worm's Head be open from Burry Holmes, unless the captain directs. The cruising ground is from W. of the Helwick Lightship and E. of the Worm's Head. **Rates:—**

Tons Register.		STATION No. 1, West of Helwick Light.	STATION No. 2, East of Helwick, West of Worm's Head.	STATION No. 3, East of Worm's Head.
		s. d.	s. d.	s. d.
Under	100	1 6	1 0	1 0
"	125	2 6	2 0	1 6
"	150	3 6	2 6	2 0
"	175	4 6	3 6	2 6
"	200	5 6	4 6	3 6
"	225	5 6	5 6	4 6
"	250	7 6	6 6	5 6
"	275	8 6	7 6	6 6
"	300	9 6	8 6	7 6

And 1s. in addition for every 25 tons beyond 300.

Rules for the payment of pilots' hobblers taking charge of ships or vessels trading over the bar, and bound to Llanelly, Pembrey, Burry Port. Limit No. 1:—If a plot be taken on board as far to the westward as to bring Rhossily Church open to the westward of the Holmes, under 40 reg. tons 1/9; with an advance of 3d foot on every additional 25 reg. tons. Limit No. 2:—If taken on board within No. 1, but to the westward of No. 4 buoy for Burry Port, or No. 6 for Llanelly, under 50 reg. tons 1/; and 3d foot for every additional 25 reg. tons. Pilots taken on board inside buoy No. 6 when bound for Llanelly, or inside No. 4 when bound for Pembrey, 2/6 each for hobble. If any vessel shall evade being boarded by a pilot in limit No. 1, she must pay for limit No. 1, although boarded above that limit, beside the penalty of refusing a pilot. Outwards:—Under 50 reg. tons 6d; and 3d for every additional 25 reg. tons. Each vessel to pay 1/ for the boat. Vessels proceeding above Llanelly pay as follows, in addition to the rates inwards and outwards from Llanelly:—From Llanelly to Penclawdd, under 50 reg. tons 3/6; from 50 to 100, 4/6; from 100 to 150, 5/6; from 150 to 200, 7/ each vessel. To Spitty, and *vice versa*, under 50 reg. tons 5/; from 50 to 100, 7/; from 100 to 150, 9/6; from 150 to 200, 10/6 each vessel. And from Penclawdd to Spitty, and *vice versa*, as follows:—Under 50 reg. tons 3/6; from 50 to 100, 4/6; from 100 to 150, 5/6; from 150 to 200, 7/ each vessel. The following rates of harbour pilotage for all vessels under 50 reg. tons 2/; under 75, 2/6; under 100, 3/ each vessel; and 6d for every 25 reg. tons. For removing from or to Llanelly and Pembrey:—Under 50 reg. tons 3/6; under 75, 4/6; under 100, 5/6 each vessel; and 1/ for every additional 25 tons. For removing from Pembrey Harb. to Burry Port, and *vice versa*:—Under 50 reg. tons 3/6; under 75, 4/; under 100, 4/6 each vessel; and 6d extra for every additional 25 reg. tons.

		PORT		PORTS.		247
FROM	TO	23ft.	23ft.			
Isle of Wight, and <i>vice versa</i> Off Dungeness to off Folke- stone, the Church bearing NNW. by compass, and <i>vice versa</i>	The Downs . .	16	16	16	16	
Off Folkestone to the South Foreland; the Lights in one, and <i>vice versa</i>	Ditto	3	3	3	3	
The Sea, the Downs, Orford- ness, or Huxley Bay, and <i>vice versa</i>	Ditto	3	3	3	3	
Pilots (In or out) continuing in charge to or from any of the following places are to be paid :—	The Nore, or W ^o Sheerness, Stan- blackstake Gravenend or C	14	14	14	14	
The Sea, the Downs, Orfordness, or Hux- ley Bay, and <i>vice versa</i>	Long Reach or Erith	22	22	22	22	
The Nore, or Warps, and <i>vice versa</i>	Woolwich or Bi- moorings, Lond Canal, or St. Greenhithe, Lo Chatham . .	23	23	23	23	
The Nore, or Warps, and <i>vice versa</i>	Erith	24	24	24	24	
The Nore, or Warps, and <i>vice versa</i>	Woolwich or Bi- moorings, Lond Canal, or St. Sheerness, Stan- blackstake . .	25	25	25	25	
Erith Reach and <i>vice versa</i>	Gravenend Woolwich or Bi- moorings, Lond Canal or St	8	8	8	8	

	Gravesend Reach and vice versa	Greenhithe, or Long Reach, and vice versa	Woolwich, or Blackwall, and vice versa	Chatham
Greenhithe, or Long Reach	0 9 0	17 1 1 5 1	18 2	12 2
Erith	0 15 1	5 10 1 15 2	12 1	4 3
Woolwich, or Blackwall	0 1	12 1	12 1	12 1
Moorings, London Docks, City	0 1	12 1	12 1	12 1
Canal, or St. Kath's Docks	4 1	18 2	12 2	12 2
Sheerness, Stangate Creek, or Blackstake	10 9	0 3	10 3	10 3
Chatham	18 3	8 3	18 4	18 4
Woolwich, or Blackwall	10 17 1	3 1	12 1	12 1
Moorings, London Docks, City	3 1	6 1	9 1	9 1
Canal, or St. Kath's Docks	3 1	6 1	9 1	9 1
Sheerness, Stangate Creek, or Blackstake	2 18 3	1 3 4 3	14 4	14 4
Chatham	3 6 3	9 3 10 3	3 4	3 4
Moorings, London Docks, City	17 1	0 1 3 1	9 1	9 1
Canal, or St. Kath's Docks	17 1	0 1 3 1	9 1	9 1
Sheerness, Stangate Creek, or Blackstake	3 6 3	10 3 14 3	2 4	2 4
Chatham	3 14 3	17 4 0 4	11 4	11 4
Sheerness, Stangate Creek, or Blackstake	15 1	18 2 1 2	11 2	11 2

dit, to be regulated as follows, viz., for 3in and under no addition, for more than 3in and under 9in, the medium between the two rates, for 9in and upwards, the rate for the next foot. For removing a ship or vessel from moorings into a dry or wet dock, or from one part of the river situated above Blackwall to another part of the river so situated, for a ship under 300 tons 15/-; of 300 to 600, 21/-; of 600 to 1,000, 31/6; above 1,000, 42/-. In the Thames above Gravesend, for a boat of a class carrying an anchor of above 4 cwt with a corresponding tow-line 42/-, for a boat of a class carrying an anchor of above 2 cwt, 21/-, for a boat of a class carrying an anchor under 2 cwt, 15/-. Per trip for the whole distance from Gravesend to London, and in proportion for any part of that distance, and for each man's service in those boats 8/- tide.

Towage.—As per agreement.

Officials.—Sec. to Thames Conservancy, J. H. Gough; Harb. Masters—London, Capt. L. Bowen; Charlton, Commr., J. Fitzgerald, R.N.; Gravesend, Capt. K. Marsden; Controller-Gen. H.M. Cust., J. J. Weir; Coll. H.M. Cust., H. Lindsay

PARTICULARS OF VARIOUS DOCKS IN LONDON.

B.—Blackwall. L.—Limehouse. THW.—Trinity High Water.

Name of Dock.	Area.	Width of entrance.	Length between gates.	Depth on sill THW.	Outer LW depth.	Owned by.
	acs.	ft. in.	ft.	ft. in.	ft. in.	
London	40					London & St. Kath. Docks Co.
Shadwell, No. 1	—	60	350	28	8	
" No. 2	—	45	180	26	—	
Wapping	—	40	167	23	—	
Hermitage	—	40	150	20	—	
St. Katharine's	10	45	180	28	8	
Royal Victoria.....	90	80	330	28	8	
Royal Albert, No. 1.....	87	80	550	36	16	
" " No. 2.....		80	550	30	10	
West India Import	30	{ B45 L36	{ B162 L150½	{ B24½ L22	{ B20½ L17½	East & West India Dks. Co., Ld.
West India Export.....	24	{ B38 L36	{ B160 L151	{ B21½ L18	{ B18 L13½	
South-West India.	26½	55	no lock	27	23½	
Junction Dock.....	1	45	"	25	21½	
River Entrance.	—	36	155	22	2½	
Blackwall Basin.....	6½	—	—	—	—	
River Entrance.	—	45	191½	22½	2½	
South Dock Basin.	5½	—	—	—	—	
South Dock, River En. B.	—	55	300	27	6½	
Do. L.	—	45	192	23 5	3 11	
East India Import.....	17½	47½	209	24 10	21 1	
Do. Export.....	8	50	—	25 10	21½	
Do. Basin.	6	—	—	—	—	
Upper River Entrance...	6	47 5	210½	24 10	5½	
Lower Do	6	65	100	31	11½	
Collier Do.	5½	30	100	20	16½	
Tilbury Tidal Basin.	17½	300	—	45	26	{ Mil. Dock Co., Ld.
Do. Main Dock.	23	80	555	45	26	
Millwall.....	38	80	450	28	—	
Albion.	11½					
Basin.	2½					
Canada.	15½					
Island.....	3½					
Stave	5½					
Russia.	14					
South.	6					
Greenland.	9½					
Norway	3½					
Lady.....	8½					
Timber Ponds.....	73					

SURREY COMMERCIAL DOCKS.
There are four river entrances to these Docks, viz.—

Name.	Length.	Width.	Depth on sill.
	ft.	ft.	ft.
The South Dock.	220	48	28
Greenland Dock.	209	42½	18½
Lavender Dock.....	320	34	18½
Surrey Dock.	250	50	28

THE LONDON & INDIA DOCKS JOINT COMMITTEE, under the London & St. Katharine and East and West India Docks Act, 1888, are now working the undertakings of both the London and St. Katharine's, and the East and West India Docks.

THE LONDON & ST. KATHARINE DOCKS. In addition to the above docks, an extensive railway depôt in East Smithfield (in connection with the docks); and the Cutler-street warehouses, in Houndsditch and Bishopsgate, City. The *St. Katharine Docks* adjoin the *London Docks*. Both these docks have large warehouses and sheds specially adapted for housing, working, and showing wool, tea, coffee, indigo, cigars and manufactured tobacco, dried fruits, sugar, flour, ivory, spices, bark, gums, metals, drugs, cotton, bacon, &c. The vaults beneath the

Now under the London and India Docks Joint Committee.

coaling jetty with hydraulic cranes is provided for the discharge of coal from colliers into barges or railway trucks. A large hotel, fitted with all the most recent improvements and lighted by electricity, stands on the river bank within 100yds of the entrance and the baggage warehouse. The lock leading from the basin to the inner docks is 80ft wide and 700ft long. Parallel with the lock are 4 dry docks, which can be entered from either the basin or inner docks, the two larger (width 70ft, depth on sill 35ft) and the two smaller dry docks (width 60ft, depth on sill 27ft) have a length which can be varied (by means of movable caissons) from 400 to 550ft. The inner docks (depth 38ft) consist of a main dock (1,000ft long, 600ft wide) and three branch docks (1,600ft long, 300ft wide). The quays of these docks (1,300 ft in length) are fitted with 24 sheds (each 300 ft long and 120ft wide), with lines of rail in front and at the back of each shed. The cranaage power consists of some 60 movable hydraulic cranes and leads, and a floating derrick capable of lifting 50 tons. Electric light is employed throughout the whole dock system.

Officials.—*Joint Committee*: Managers, H. W. Williams and E. H. Baily; Secretary, H. J. Morgan. *London and St. Katharine's Dock Company*: Secretary, S. J. Becher. *East and West India Dock Company*: Secretary, J. G. Broodbank. *Superintendents*: G. Cox (*London and St. Katharine Docks*), T. Beck (*East and West India Docks*), J. Megson (*Royal Victoria Dock*), W. Morrison (*Royal Albert Dock*), R. Adams (*Tilbury Dock*), A. Champ (*Town Warehouses*): Chief Engineer, R. Carr; Dock Masters, Captain J. H. Duckham (*East India Dock*); Capt. W. E. Dove (*West India Dock*); Capt. T. F. E. Ayles (*Tilbury Dock*); Capt. G. D. Taylor (*London Dock*); Capt. Irvine Ross (*St. Katharine's Dock*); Capt. C. Hogg (*Royal Victoria Dock*); Capt. G. B. Linch (*Royal Albert Dock*).

Chief Office, Dock House, 109, Leadenhall Street, E.C.

THE SURREY COMMERCIAL DOCKS occupy nearly the whole of a peninsula in the Thames, between the Lower Pool and Limehouse Reach. The principal trade of these docks is in timber, grain, and seed. There are sheds for the storage of prepared wood goods covering about 20 acres, and granary accommodation for 300,000 qrs. The area of piling ground for the storage of wood cargoes is 222 acres. The length of the quayage available for use by vessels is about 5 miles. The Surrey Canal—the property of the Dock Company—which is over 4 miles in extent, and has an area of about 40 acres, runs from the docks at Rotherhithe to Camberwell, with a branch to Peckham. The docks are in communication with the L.B. & S.C. Ry., on the south of the Thames, and with the various railways on the north of the river. **Charges.**—Tonnage rates on steamers and sailing vessels vary from 3d to 1/ reg. ton. for dues, and ½d to 1d reg. ton for rent per week. Special rates for vessels wholly grain laden, and various exceptions and special rates.

Officials.—Sec., J. Griffin; Supt., S. Brownfield; Engineer, J. A. McConnochie; Dock Master, Capt. Welch.

Chief Office, Dock House, 106, Fenchurch-st., E.C.

THE MILLWALL DOCKS are situate on the Isle of Dogs, immediately south of the West India Docks. Railway entrance from the Millwall Dock Station of the N.L. & B. Rys. River entrance from Limehouse Reach, just opposite the Deptford Victualling Yard, and about two-thirds of a mile south of the

MEVAGISSEY, Cornwall. Lat. $50^{\circ} 16' N$; long. $4^{\circ} 46' W$.
Auth. Trustees, under Act 15 Geo. III., c. 62,
and Prov. Order 28 and 29 Vict., c. 76. Accn. Area $2\frac{1}{2}$ acres. D.
Dry at LW., 18ft HWST., and 11ft HWNT. LV. 200 tons.
W. prev. W., most dangerous SE. THW. f. and c. 5h 9m. A
lifeboat station.

Officials.—Man. Trustee, J. S. Iago; Harb. Master, W. Robins.

MIDDLESBORO', Yorkshire. On the Tees, about 8 miles
from its mouth and $4\frac{1}{2}$ miles below
Stockton (see also Stockton-on-Tees). Lat. $54^{\circ} 34' N$; long.
 $1^{\circ} 6' W$. Pop. 70,000. Auth. River Tees, Tees Conservancy
Commissioners, under Tees Conservancy Acts, 1852 and 1875;
Docks, N.E. Railway Co. P. NC. THW. 3h 55m; Sp.
rise 13ft; N. rise $10\frac{1}{2}$ ft. D. on bar 17 $\frac{1}{2}$ ft at LWST.; the
lowest depth on the bar at LWST. is 14ft. W. prev. and
most dangerous are from N. and ENE. Ry. NE. Tr.—I. Tim-
ber, grain, flour, slates, iron ore, &c.; E. Manufactured iron and
steel machinery, chemicals, general goods, bricks, clay, coke, coal,
&c. LV. 2,729 tons net reg., 23ft 11in dft, 4,351 tons cargo.
The entrance to the river Tees is between the N. and S. Gare
breakwater, and vessels of 13ft to 15ft dft. can enter at LWST.

The Middlesboro' Dock is the property of the N.E. Railway Co.
Area of $15\frac{1}{2}$ acres, depth on sill OST. 28ft. Length of quay wall,
3,145ft. Twenty-six cranes of from 35 cwt to 15 tons, and sheer
legs capable of lifting 60 tons.

Graving Docks, &c.:—

Charges.—Dock dues on ships, dock dues, rates or tolls on
goods and cattle. Dock police, 6d to 2s according to size. Charges
for assistance in mooring ships. Dock charges on goods. Trim-
ming charges, &c.

Pilotage.—Rates per foot. Tees rates from April 1 to October
1, 1/9; from October 1 to April 1, 2/. Tees river pilotage all
the year round, 1/9. Tees rates for docking and transporting not
ex. 200 tons reg., 5/; not ex. 400 tons, 7/6; not ex. 600 tons, 10/;
not ex. 800 tons, 15/; not ex. 1,000 tons, 17/6; not ex. 1,500 tons,
£1; not ex. 2,000 tons, £1 5s; ex. 2,000 tons, £1 10s. Ships over
400 tons reg. shall pay one halfpenny per ton on the excess of ton-
nage above 400 tons, in addition to the above pilotage dues.
Vessels having lee-boards pay 5/ in addition to the above rates.
North Sea and East Coast. Pilotage as agreed.

Pilotage.—Rates :—

Reg. Ton.	Vessels from Foreign Ports, Inwards and Outwards.	Vessels Coastwise.	
		Inwards.	Outwards.
	£ s. d.	£ s. d.	£ s. d.
All under 50 tons	0 10 10	0 6 0	0 5 0
50 and under 75 tons	0 16 0	0 10 0	0 6 0
75 " 100 "	1 0 0	0 12 0	0 8 0
100 " 150 "	1 10 0	1 0 0	0 10 0
150 " 200 "	1 15 0	1 0 0	0 15 0
200 " 300 "	2 5 0	1 2 6	0 17 6
300 " 400 "	2 12 6	1 5 0	1 0 0
400 " 550 "	3 0 0	1 10 0	1 0 0
550 " 1,000 "	4 0 0	2 13 6	1 6 6
1,000 " 1,250 "	4 10 0	3 0 0	1 10 0
1,250 " 1,500 "	5 0 0	3 6 6	1 13 6
1,500 " 1,750 "	5 10 0	3 13 6	1 16 6
1,750 " 2,000 "	6 0 0	4 0 0	2 0 0
2,000 and upwards	6 10 0	4 6 6	2 3 6

Pilot master's fee 5% on pilotage. Tide's work of boat and crew as per agreement. Extra pilotage fee of one-half the inward pilotage dues to be paid by vessels moored fore and aft to both of the Stell buoys, and transported to or from the buoys from or to the dock or quays.

Towage.—In ballast 2½d ; loaded 2¾d ton.

Officials.—Harb. and Dock Master, Capt. James Hughs ; Coll. of Shore Dues, L. S. Smith ; Coll. of HM. Cust., — Wallace.

Hotels.—"The Queen's" and "The Star."

MORECAMBE, Lancashire. Auth. M.R. Co., by Statute 9 and 10 Vict. Accn. Crane power to 5 tons. D. on bar 2½ft LW., and 28ft at HWST. LV. 560 tons at HW. W. prev. W. THW. at f. and c. 11h 30m. Steamers to Londonderry twice a week.

Charges.—Lights and buoys 2d per ton home trade ; 3d foreign.

Officials.—Gen. Man., John Noble, Derby ; Harb. Master, I. M. Sibbald.

Hotel.—"The Midland."

MORRISON'S HAVEN, Edinburghshire. Firth of Forth. Lat. 55° 59' N ; long. 3° 10' W. Ry. NB. THW. f. and c. 2h 17m. Accn. A wooden pier 415ft long. Crane of 2 tons' power. D. Dry at LW ; at HWST. 13 to 14ft, and at HWNT. 9 to 11ft. W. prev. W. ; most dangerous NE. LV. 350 tons. Tr.—I. Cement, peat moss litter, manures, and oils ; F. Coal, fire bricks, coal tar, iron goods, and fireclay goods. Sidings from NB. Ry. to loading and discharging berths.

Officials—Man., F. R. Luke, German Consular Agent and Man. of Prestongrange Coal and Fire Brick Co. ; Harb. Master, H. Pow.

Charges.—Harb. dues 1d per ton reg. Shore dues 2d per ton. Crane dues 9d per ton.

Pilotage.—1/ per foot. Trimming 2½d per ton.

Hotel.—"Queen's Arms," Prestonpans.

upon the rates from sea to Shields, or from sea to either dock, direct. **Stations.** The river is divided into six stations, making Shields one starting point, Newcastle the other:—1st station, from Shields to either dock, Jarrow, or Willington Gut; 2nd station, from Shields to Hebburn and Wallsend; 3rd station, from Shields to Walker or Pelaw Main; 4th station, from Shields to Bill Quay or Felling; 5th station, from Shields to Dent's Hole or Tyne Main; 6th station, from Shields to Newcastle. **Screw Steamers Towage.** Screw steamers, when light, whether steaming or not, same as other ships; loaded, when steaming, to be allowed one-fourth off the regular rates; not steaming, same as other ships. **Towage Rates** within the limits at sea into Shields Harb., and to either dock, and from either dock to sea, or a single station, for vessels below 150 tons:—

Tons.	From Sea to Shields, or Shields to Sea.		Sea to Dock or Dock to Sea.		Shields to Dock, Dock to Dock, or a single Station.	
	Light.	Loaded.	Light.	Loaded.	Light.	Loaded.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
40	0 10 0	0 10 0	0 14 0	0 14 0	0 6 6	0 9 0
50	0 10 6	0 11 0	0 15 0	0 15 0	0 7 0	0 9 6
60	0 11 0	0 12 0	0 16 0	0 16 0	0 7 6	0 10 0
70	0 11 6	0 13 0	0 16 6	0 17 0	0 8 0	0 10 6
80	0 12 0	0 14 0	0 17 0	0 18 0	0 8 6	0 11 0
90	0 12 6	0 15 0	0 17 6	0 19 0	0 9 0	0 11 6
100	0 13 0	0 16 0	0 18 6	1 0 0	0 9 0	0 12 0
110	0 13 6	0 17 0	0 19 6	1 1 0	0 9 0	0 13 0
120	0 14 0	0 17 6	1 0 6	1 2 0	0 9 0	0 14 0
130	0 14 6	0 18 0	1 1 0	1 2 6	0 9 0	0 14 6
140	0 15 0	0 18 6	1 1 6	1 3 0	0 9 0	0 15 0
149	0 15 6	0 19 0	1 2 0	1 3 6	0 9 6	0 15 6

All vessels above 150 tons British register:—

Sea to any part of Shields Harbour	1½	1½
Sea to Tyne or Northumberland Docks	1½	1½
(The same out to Sea.)		
Shields to either Dock, Jarrow, or Willington	1½	0½
Dock to Dock or a single Station	1½	0½
Shields to Sea	1½	1½

Loaded Vessels per Reg. Ton. d.
Light Vessels per Reg. Ton. d.

Shifting Tonnage:—

Vessels above 150 tons register—per reg. ton	0 0 ½	0 0 ½
Vessels below 150 tons register—		
„ under 50 „	0 5 0	0 4 0
„ under 100 „	0 6 0	0 5 0
„ under 150 „	0 7 6	0 6 0

Per Shift. £ s. d.
Per Shift. £ s. d.

River Towage. Vessels above 200 tons register. From Shields to the following stations:—

Loaded Vessels per Reg. Ton. d.
Light Vessels per Reg. Ton. d.

Shields to either Dock, Jarrow, or Willington	1½	0½
Shields to Wallsend	1½	1
Shields to Walker, or Pelaw Main	1½	1½
Shields to Bill Quay, or Felling	1½	1½
Shields to Dent's Hole, or Tyne Main	2	1½
Shields to Newcastle	2½	1½

From Newcastle to the following Stations:—

Newcastle to Tyne Main, or Dent's Hole ..	1½	0½
Newcastle to Felling or Bill Quay	1½	1
Newcastle to Pelaw Main, or Walker	1½	1½
Newcastle to Wallsend	1½	1½
Newcastle to Willington, or Jarrow	2	1½
Newcastle to either Dock or Shields	2½	1½

Newcastle station deemed to extend from Tyne Bridge to Ouseburn.

Vessels below 200 tons register. From Shields to the following stations:—

1st Station.	2nd Station.	3rd Station.	4th Station.
Shields.	WallSEND.	Walker, or Pelaw Mam.	Bill Quay, or Felling.
	8'0	11'0	11'0
	9'0	11'6	12'0
	9'6	12'0	13'0
	10'0		14'0
	10'6		
	11'0		
120.....	9'0	14'0	
130.....	9'0	14'6	
140.....	9'0	15'0	13'6
150.....	9'6	15'6	14
160.....	10'0	17'0	
170.....	11'0	18'0	
180.....	11'6	19'0	
190.....	12'0	20'0	20'6
200.....	12'6	21'0	21'0

Below 200 tons register. From

1st Station.
Tyne
Main, or
Dent's
Hole.

castle Bridge to Scotswood Suspension Bridge; (3rd station) from Newcastle Bridge to Lemington and Blaydon. A tonnage rate for vessels above 200 tons register from Newcastle Bridge to the following stations:—

	Reg. Ton.†	Reg. Ton.*
Newcastle to Elswick	1	0 1/2
" Scotswood	1	1
" Lemington or Blaydon	1	1 1/2
Blaydon to Scotswood	1	0 1/2
" Elswick	1	1 1/2
" Newcastle	1	1 1/2

Shifting tonnage same as below Bridge.

* Light.

† Loaded

Vessels below 200 tons register. Newcastle to the following stations:—

Tons.	1st Station. Newcastle to Elswick.			2nd Station. Newcastle to Scotswood			3rd Station. Newcastle to Blaydon.		
	Light.	Loaded.		Light.	Loaded.		Light.	Loaded.	
	£ s. d.	£	s. d.	£ s. d.	£	s. d.	£ s. d.	£	s. d.
40	0 6 6	0	9 0	0 8 0	0	11 0	0 9 6	0	13 0
50	0 7 0	0	9 6	0 9 0	0	11 6	0 10 6	0	14 0
60	0 7 6	0	10 0	0 9 6	0	12 0	0 11 6	0	15 0
70	0 8 0	0	10 6	0 10 0	0	12 6	0 12 6	0	16 0
80	0 8 6	0	11 0	0 10 6	0	13 0	0 13 0	0	17 0
90	0 9 0	0	11 6	0 11 0	0	14 0	0 13 6	0	18 0
100	0 9 0	0	12 0	0 11 6	0	15 0	0 14 0	0	19 0
110	0 9 0	0	13 0	0 12 0	0	16 0	0 14 6	1	0 0
120	0 9 0	0	14 0	0 12 6	0	17 0	0 15 0	1	1 0
130	0 9 0	0	14 6	0 13 0	0	18 0	0 15 6	1	2 0
140	0 9 0	0	15 0	0 13 6	0	19 0	0 16 0	1	3 0
150	0 9 6	0	15 6	0 14 0	1	0 0	0 16 6	1	4 0
160	0 10 0	0	17 0	0 14 6	1	1 0	0 17 0	1	5 0
170	0 11 0	0	18 0	0 15 0	1	2 0	0 17 6	1	6 0
180	0 11 6	0	19 0	0 15 6	1	3 0	0 18 0	1	7 0
190	0 12 0	1	0 0	0 16 0	1	4 0	0 18 6	1	8 0
200	0 12 6	1	1 0	0 17 0	1	5 0	0 19 0	1	9 0

The following scale of 2d in the shilling is to be added to and charged in addition to the above towage rates:—

Scale under £1.				Scale above £1.			
s.	£	s.	d.	£	£	s.	d.
1	0	0	2	1	0	3	4
2	0	0	4	2	0	6	8
3	0	0	6	3	0	10	0
4	0	0	8	4	0	13	4
5	0	0	10	5	0	16	8
6	0	1	0	6	1	0	0
7	0	1	2	7	1	3	4
8	0	1	4	8	1	6	8
9	0	1	6	9	1	10	0
10	0	1	8	10	1	13	4
11	0	1	10	11	1	16	8
12	0	2	0	12	2	0	0
13	0	2	2	13	2	3	4
14	0	2	4	14	2	6	8
15	0	2	6	15	2	10	0
16	0	2	8	16	2	13	4
17	0	2	10	17	2	16	8
18	0	3	0	18	3	0	0
19	0	3	2	19	3	3	4
20	0	3	4	20	3	6	8

Officials (Tyne Commissioners).—Sec., Robert Urwin; Engineer, P. J. Messent; Harb. Master, North Shields, J. Bruce; Harb. Master, Newcastle, C. Wilson; Dock Master (*Northumberland* and *Albert Edward Docks*), T. Glover; Supt. of River Police, R. Farmer; Coll. of Dues on Goods, T. D. Hume; Dock Supt. W. B. Emmerson.

Hotels.—“Central,” “Alliance,” “Douglas,” “County,” “Turf,” “Central Exchange,” &c.

NEW GRIMSBY.—See Scilly.

NEW HOLLAND, on the Humber, opposite Hull.

NEWHAVEN, Edinburghshire.—See Leith.

NEWHAVEN, Sussex. On the NW. extremity of Seaford Bay, at the mouth of the river Ouse. Lat. 50° 46' 55" N; long 0° 3' 40" E. Pop. 4,000. Auth. Newhaven Harb. Company,

entrance 300ft, entrance lock length 350ft, entrance lock width 65ft, depth of water over outer sills AST. 35ft, ANT. 25ft, area 28½ acres; area of land appropriated for quays, warehouses, &c., 240 acres, for deposit of ballast free of charge for present works 93 acres. *Old Dock*: Length 1,753ft, width 300ft, entrance lock, length 220ft, width 61ft, depth of water over outer sills AST. 31ft, ANT. 20ft, area 11½ acres. *Alexandra Graving Dock*: This dock is entered from the main wet dock, thus effecting a large saving of time, charges, and labour. Dimensions are, length from gates to head 532ft, on blocks 515ft, width of entrance 50ft, of dock 74ft, average depth of water on sill 20ft. Timber float: Area of water for storage of timber in bulk 10 acres, average depth of water 8ft. The float is provided with ample siding accn. Twenty hydraulic and steam cranes in docks, two of 15 tons' power, and sheer legs for masting. Fitting shops and all conveniences for repairing vessels. A lifeboat station.

Name of Dry Docks, &c.	Owner.	Length.	Breadth.	Depth over sill OHW.	Remarks
Alexandra	Alexandra Dock Co.	ft. 534	ft. 70	ft. 20	Entered from wet dock.
Old Dry Dock No. 1....	Morley, Carney & Co.	222	36	19	Tidal dock.
Do. do. No. 2....	Do.	280	46	25	
Dock No.	N.S.D.D. & E. Co., Ltd.	380	57½	22	
Gridiron (on the Usk) ..	.....	247	37	—	

Pilotage.—District. The Bristol Channel to the eastward of Lundy Island, up to and including King Road and the River Usk, as far as Caerleon Bridge. **Rates:—**

For Laden and Unladen Vessels.	Under 100 Tons.	100 Tons and under 200.	200 Tons and under 300.	300 Tons and under 400.	400 Tons and under 500.	500 Tons and under 600.	600 Tons and under 700.
From Newport to River's Mouth and <i>vice versa</i> .	£ s. d. 0 10 0	£ s. d. 0 15 0	£ s. d. 0 17 6	£ s. d. 1 2 6	£ s. d. 1 5 0	£ s. d. 1 6 0	£ s. d. 1 8 0
From Newport to Holmes, and <i>vice versa</i> .	0 15 6	1 0 0	1 10 0	1 15 0	2 1 0	2 3 0	2 8 0
From Newport to Nash Point or Minehead, and <i>vice versa</i> .	1 2 6	1 15 0	2 5 0	2 17 6	3 1 0	3 5 6	3 13 0
From Newport to Ilfracombe or East of Coombe and <i>vice versa</i> .	1 12 6	2 7 6	3 5 0	3 12 6	4 3 6	4 10 6	5 3 0
From Newport to Lundy Island or West of Ilfracombe, and <i>vice versa</i> .	2 5 0	3 0 0	4 0 0	4 12 6	5 6 0	5 18 0	6 13 0

the river Barrow, and to the lock quay of Inistioge, on the river Suir. Rates :—

Reg. Tonnage.	Foreign.	U. K.	Reg. Tonnage.	Foreign.	U. K.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
30 and under 40..	0 8 0	0 5 0	272 and under 300..	2 9 6	1 13 0
40 ..	50.. 0 10 0	0 6 0	300 ..	325.. 2 11 9	1 14 6
50 ..	60.. 0 11 6	0 7 6	325 ..	350.. 2 14 0	1 16 0
60 ..	70.. 0 15 9	0 10 6	350 ..	375.. 2 16 3	1 17 6
70 ..	80.. 0 18 0	0 12 0	375 ..	400.. 2 18 6	1 19 0
80 ..	90.. 1 0 3	0 13 6	400 ..	450.. 3 0 9	2 0 6
90 ..	100.. 1 2 6	0 15 0	450 ..	500.. 3 5 3	2 3 0
100 ..	110.. 1 4 9	0 16 6	500 ..	550.. 3 9 9	2 5 6
110 ..	120.. 1 7 0	0 18 0	550 ..	600.. 3 14 3	2 8 0
120 ..	130.. 1 9 3	0 19 6	600 ..	650.. 3 18 9	2 10 6
130 ..	140.. 1 11 6	1 1 0	650 ..	700.. 4 3 3	2 13 0
140 ..	150.. 1 13 9	1 2 6	700 ..	750.. 4 7 9	2 15 6
150 ..	160.. 1 16 0	1 4 0	750 ..	800.. 4 12 3	2 18 0
150 ..	175.. 1 18 3	1 5 6	800 ..	850.. 4 16 9	3 0 6
175 ..	200.. 2 0 6	1 7 0	850 ..	900.. 5 1 3	3 3 6
200 ..	225.. 2 2 9	1 8 6	900 ..	950.. 5 5 9	3 5 0
225 ..	250.. 2 5 0	1 10 0	950 ..	1,000.. 5 10 3	3 8 0
250 ..	275.. 2 7 3	1 11 6	1,000 and upwards	5 14 9	3 10 6

All vessels proceeding up the port and harb. above the limits of the borough of New Ross, pay additional rates not exceeding one-third more than the above rates.

Towage.—Between Passage and Waterford, and from Cheek-point to New Ross.

Reg. Tons.	Ballast.	Loaded.	Reg. Tons.	Ballast.	Loaded.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
150 to 180	2 5 0	3 0 0	350 to 400	6 0 0	9 0 0
180 .. 200	2 15 0	3 10 0	400 .. 450	6 10 0	10 0 0
200 .. 220	3 5 0	4 10 0	450 .. 500	7 0 0	11 0 0
220 .. 240	3 15 0	5 10 0	500 .. 550	7 10 0	12 0 0
240 .. 260	4 0 0	6 10 0	550 .. 600	8 0 0	13 0 0
260 .. 280	4 10 0	7 0 0	600 .. 650	8 10 0	14 0 0
280 .. 300	5 0 0	7 10 0	650 .. 700	9 0 0	15 0 0
300 .. 350	5 10 0	8 10 0			

Small vessels according to agreement.

New Ross has ceased to be a customs port, and is now under Waterford.

NEWRY, Co. Down. At the head of Carlingford Bay. Lat. 54° 10' N; long. 6° 16' W. Pop. 15,500. Auth. Newry Nav. Co., under a statute of Geo. IV. P. NC. THW. f. and c. at Needham Bridge 11h 43m; Sp. rise 6ft 10in. There is a channel cut through the bar 400ft wide, with a depth at LWST. of 15ft. W. prev. and most dangerous SE. Rys. G.N., D.N. & G. Tr.—I. Coal, iron, grain, timber, &c; E. Linen, agricultural produce, granite, &c. LV. *Lady Havelock*, 849 reg. ton. Accn. is a navigable river from Warrenpoint to the sea lock at Fathom; a ship canal from Fathom to Newry, and a quayage through Newry for vessels drawing 10½ft, and an inland canal from Newry to Portadown. Entire length of navigation about 46 miles. The area of docks is 9 acres. There are also berths along the sides of the canal through the town of Newry for vessels drawing 9 and 10ft; the length of canal is 3,250ft. The quayage is 3,740ft, including 870ft round Ballast Bank for vessels up to 12½ft dft., and the quayage along canal for vessels up to 10ft dft. is about 3,250ft on each side. The navigation depends on a tidal river, in which there is a depth of 7ft at LWST. Vessels drawing up to 15½ft can enter at HW. to sea lock, but can only enter old part of canal and dock

Vessels up to 800 tons burthen take the ground. Particulars of Accn.:—

Name.	Length.	Width.	Area.	Length of Lock.	Width of Entrance.	Depth of Water.	
						OST.	NT.
	ft.	ft.	acres.	ft.	ft.	ft.	ft.
Dock	2,900	370	23	270	60	35	25
Basin	400	330	3	—	60	35	25

Patent Slipway to take Vessels 310ft long and 2,200 tons burthen.

Gridiron, 400ft long, for vessels up to 2,500 tons.

There are 14 high-level coal tips in the dock and 2 in the basin. Cranes, worked by hydraulic power, for the discharge of ballast, iron ore, &c. There are also the Windsor slipways between Penarth and Cardiff, taking vessels of the largest tonnage.

Charges.—Tidal harb. rates $\frac{1}{2}$ d and 1d ton, according to size. Dock rates on vessels $1\frac{1}{2}$ d to 9d ton.

Pilotage.—See Cardiff.

Towage.—Same as Cardiff.

Officials.—Taff Vale Railway Co., Cardiff, Sec. and Goods Supt., John Jones; Traffic Man., J. Hurman; Penarth Dock Master, W. M. Pengelley; Supt. and Collector, J. Edwards; Staith Master, H. Griffiths.

PENRHYN, Cornwall. Lat. $50^{\circ} 10' N$; long. $5^{\circ} 5' W$. Auth. Corporation, under Statute 33 and 34 Vict. c. 82, and Prov. Order, 1870. Ry. S.D. & C. Harb. dries at LW. D. 9ft HWNT., and 12ft 6in at HWST. THW. f. and c. 5h 2m. There are several private wharves, and crane power to 20 tons.

PENTEWAN, Cornwall. Lat. $50^{\circ} 17' N$.; long. $4^{\circ} 46' W$. Pop. 300. Auth. Owner, C. H. T. Hawkins. Accn. Dry at low water. Used by vessels drawing 13ft, and up to 300 tons. Area $1\frac{1}{2}$ acres, protected by quay and breakwater. THW. at f. and c. 5 o'clock.

Charges.—Harb. dues 2d ton; quay dues 6d ton.

Official.—Harb. Master, T. Anthony.

PENZANCE, Cornwall. Mount's Bay. Lat. $50^{\circ} 8' N$; long. $5^{\circ} 35' W$. Pop. 12,409. Auth. Mayor, Aldermen, and Burgesses, under Act, 1883, and Prov. Order, 1870. P. C. THW. 4h 30m; Sp. rise $16\frac{1}{2}$ ft; N. rise $12\frac{1}{2}$ ft. D. 26ft to 13ft HWST. W. prev. NW., most dangerous SSE. Ry. G.W. Tr.—I. American and Baltic timber, coal, hides, tallow, grain, hemp, fruit, potatoes, dynamite, &c.; E. Copper, tin, granite stones, fish, potatoes, china clay, arsenic, iron ore, &c. LV. *William Cory*, s., 1,244 tons. Accn. Area of harb., formed by Albert Pier, 24 acres, with 16ft depth at ST., and 12ft NT. Floating dock area $3\frac{1}{2}$ acres, depth on sill ST. 21ft, NT. 17ft, width of entrance 50ft. Graving dock, 250ft long, width of entrance 40ft, depth on sill HWOST. $12\frac{1}{2}$ ft. Warehouse accommodation. Wharfage space of about 4,700ft.

Charges.—Harb. dues, keelage in outer harbour 3d ton; in dock, coasters 5d ton; foreign 6d ton.

Pilotage.—District. From the Lizard to Cape Cornwall, and *vice versa*. **Rates.** From sea, and *vice versa*, to either of the roadsteads or piers in Mount's Bay, 7ft and under, 10/; 8 to 10ft, 16/; 11ft, 24/; 12ft, 30/; 13ft, 35/; 14ft, 40/; 15ft, 45/; 16ft, 50/; 17ft, 55/; 18ft, 60/; 19ft, 67/; 20ft, 77/; 21ft, 87/; 22ft, 97/. From all roadsteads, and *vice versa*, to either of the different piers in Mount's

Bay 1/6 foot dft. Coasting vessels one-half these rates. Boats and vessels boarded by pilots at a distance southward of the Bay :— For putting a pilot on board without a line drawn from the Lizard to Tol Peden Penwith, £2 2s ; for putting a pilot on board within a line drawn from the Lizard to Tol Peden Penwith, and without a line drawn from Carn Dew to Pengwinion Point £1 1s ; for putting a pilot on board within a line drawn from Carn Dew to Pengwinion Point, and without a line drawn from St. Clement's Isle to Trewanas Head 10/ ; and within those limits, inwards only 5'. No master of a vessel is compelled to take a pilot for Mount's Bay and Penzance within this district until he comes within a line drawn from St. Clement's Isle to Trewanas Head.

Towage.—As per agreement.

Officials.—Town Clerk, T. Cornish ; Harb. Master, J. Murrish ; Ry. Man., J. Peach ; Supt. H.M. Cust., L. C. Read.

Hotels.—"Queen's," "Railway," "Union," "Western and Mount's Bay."

PERTH, Perthshire. On the Tay, 22 miles above Dundee, and 29 miles from the sea. Lat. 56° 24' N ; long. 3° 29' W. Pop. 33,000. Auth. Town Council of Perth, under statute. P. NC. THW. f. and c. 3h 35m ; Sp. rise 9½ft. D. The Tay up to Dundee is navigable for ships drawing 23ft at ST. W. prev. There is no danger from winds. Rys. Cal., N.B., and H. Tr.—I. Timber, coal, salt, grain, iron, slates, oilcake, &c. ; E. Native wood, potatoes, grain, old iron, &c. LV. at ST. 450 reg. tons. ; none at LW. Accn. The area of the tidal basin is about 2½ acres, and the length of quays, including the river side, 650yds. There is cranage and shed accommodation.

Charges.—Berthing fees 1/ vessel. Rates and duties on vessels and boats. Dues on goods. Tay buoys dues (see Dundee Harb. Tay light dues).

Towage.—Dundee to Newburgh 6½d ; Flisk to Newburgh 3½d ; Dundee to Perth 9½d ; Flisk to Perth 7½d ; Lowhead to Perth 6½d ; Newburgh to Perth 5½d ; Earmouth to Perth 5d ; Elcho to Perth 4½d ; Orchardnock to Perth 4d ; Light —Perth to Newburgh 3d reg. ton. Up the river to the new harb., and not having water up to the shore the same tide, by agreement, and if disappointed, the same as if the vessel was towed to her destination. Light vessels bound to the river pay the same as loaded. Vessels under 50 tons pay at the rate of 50 tons. Foreign vessels 1d extra. The money to be paid as soon as the vessel arrives at her destination.

Officials.—Town Clerk, W. Macleish ; Harb. Master, D. Taylor ; Prin. Ct. Officer and Reg. of Shipping, H. Christie.

PETERHEAD, Aberdeenshire. Lat. 57° 30' N ; long. 1° 46' W. Pop. 11,000. Auth. Harbour Trustees, under Acts 1873, 1876, and Prov. Order 1881. P. NC. THW. f. and c. oh 34m ; Sp. rise 11½ft ; N. rise 9½ft ; R. of N. 6½ft. D. on bar 5ft below LWST. W. prev. and most dangerous from NE. to SE. Ry. G.N. (S). Tr.—I. Timber, lime, bones, manure, salt, flour, coal, &c. ; E. Grain, fish, whale oil, &c. LV. at any time

of tide was 621 reg. ton. ; at LWST. 60 tons. Accn. There are three harbours, viz. :—

Name.	Area.	Depth of Water LWST.	Rise of Tide ST.	Quayage
	acres.	ft.	ft.	ft.
North	9	4	11	2,715
South	6½	6	...	2,240
Port Henry (a boat harbour)	5	...	...	600
Total.....	20½	...	...	5,555

There is a national harb. of refuge now being constructed. There are also the following Graving Docks :—

	Length.	Breadth.	Depth on Sill OHW
	ft.	ft.	ft.
New	190	35	15
Old... ..	138	34	12

Charges.—Harb. dues, coastwise 3¼d ton, windbound 1d ton ; foreign 6d ton, windbound 2d. Harbour lights ¼d reg. ton. Lifeboat dues 1/ each vessel per annum.

Pilotage.—Rates.—

	£ s. d.		£ s. d.
Vessels under 40 tons	0 8 6	120 tons and under 160 tons..	1 7 0
40 tons and under 50 tons ..	0 11 0	160 " " 200 " ..	1 14 0
50 " " 60 " ..	0 13 0	200 " " 250 " ..	1 18 0
60 " " 70 " ..	0 15 0	250 " " 300 " ..	2 6 0
70 " " 80 " ..	0 17 0	300 " " 350 " ..	2 12 0
80 " " 90 " ..	0 19 0	350 " " 400 " ..	2 16 0
90 " " 100 " ..	1 1 0	400 " " 500 " ..	3 7 0
100 " " 120 " ..	1 3 6	500 " upwards	4 4 0

A reduction of one-third of the amount of these charges is made therefrom in the case of vessels entering the harbour for safety or convenience.

Towage.—Inwards or outwards 2d reg. ton.

Officials.—Clerk to Trust., P. Irvine ; Harb. and Dock Master, G. Birnie ; Ry. Man., R. Moffatt ; Coll. of Shore Dues, A. G. Jaffray ; Coll. of H.M. Cust., E. G. Jeffrey.

Hotels.—" North Eastern," " Royal," and " Laing's."

PETTYCUR.—See Kingholme.

PHILLIP'S HARBOUR, Pentland Frith. D. HWST. 12ft ; HWNT. 8ft.

Official.—Harb. Master, J. Bincks.

PIEL.—See Barrow-in-Furness. THW. at f. and c. 11h 5m.

PITTENWEEM, Fifeshire, Firth of Forth. Lat. 56° 13' N ; long. 2° 43' 30" W. Auth. Town Council, under old Charter confirmed by Act of Charles I. and the Estates of the Parliament of Scotland, 28th June, 1633 Accn. Two basins and an outer harbour ; depth about 10ft HW. ; dry at LW. W. prev. E. and SE.

PLYMOUTH, Devonshire. On Plymouth Sound, between the estuaries of the rivers Plym and Tamar. Lat. 50° 22' N ; long. 4° 9' W. Pop. with Devonport and Stonehouse, 140,000. Auth. as below. P. NC. THW. f. and c.

PORT CHARLOTTE, Island of Islay, Hebrides. Auth. Owner, Chas. Morrison, of Islay.

A small place used by fishing boats.

PORT DINORNIC (see Carnarvon). Tidal basin 480ft × 156ft.

Quayage 1,060ft; 13ft HWST., 8ft 6in

HWNT. Quayage outside basin 960ft; 14ft HWST., 9ft HWNT.

There is a patent slipway.

PORT DYNLLEYN, Carnarvonshire. Lat. 52° 55' N; long. 4° 35' W. THW. f. and c. 7h 29m.

A lifeboat station.

PORT EASY, Banffshire, Scotland. 2 miles E. of Buckie.

A fishing harb.

PORT EDGAR, Queensferry, Firth of Forth, Scotland. Auth.

NB. Ry. Co., under their General Powers Act, 1870. Accn. Area 30 acres at LW. D. 8ft LW. Harb. formed by two piers. Used principally by the Co.'s ferry steamer. W. prev. E. and W.

PORT ELLEN, Island of Islay, Hebrides. Lat. 55° 37' 10" N; long. 6° 12' 40" W. Auth. Owner, John Ramsay, under Statute 9 and 10 Vict. A small harb. used by steamers and trading vessels. W. prev. and most dangerous W. and SW., but storms from NW. are the worst for vessels within the harb.

PORT ERIN, Isle of Man. Auth. Commrs. of Isle of Man, under Statute 1872. Harb. protected by a breakwater 900ft long, carried into 35ft LWOSt. A LW. landing pier. Length has 12ft alongside at LW. A lifeboat station. W. most dangerous W. (See Isle of Man.)

PORT ERISCA, Island of St. Uist, Hebrides. A good harb. for small vessels.

PORT ERROL, Aberdeenshire. Lat. 57° 26' N; long. 1° 50' W. A small harb., dry at LW. THW. f. and c. oh 49m. A lifeboat station.

PORT GLASGOW, River Clyde. Lat. 55° 56' 15" N; long. 4° 14' W. Auth. Trustees under Act 27 and 28 Vict., c. 40. W. prev. NNW. Accn. Area about 16½ acres, with D. of 12ft. Several cranes to 20 tons.

Name.	Length.	HWST.	HWNT.
	ft.	ft.	ft.
East Wharf	500	28	21
E. Side Swing Bridge Wharf	240	10	8
Wet Dock Wharves, 53ft wide entrance	1040	28	21
Waterloo Wharf	250	10	8
Quay Wharf	240	21	19
New Wharf, E. Quay	280	22	20
E. Mid. Harb., 130ft wide entrance	570	14	12
E. Side Mid. Quay	240	23	21
W. Side Mid. Quay	240	18	16
W. Side Mid. Harb.	440	10	8
SS. Steamboat Quay	350	13	11
NS. Steamboat Quay	1000	20	18
Paton's Quay	460	9	7

Official.—Sec., D. R. Maclelland; Harb. Master, W. McNab.

PORT GORDON, Banffshire, Moray Firth. Auth. Duke of Richmond and Gordon, under the Port Gordon Harb. Act, 1854. Accn. Area 2 acres. Dry at LWST.,

13ft HW., dry at LW. alongside. Depth in harb. 3ft at LW. and 17ft at HWST. THW. f. and c. 7h 27m.

PORTMAGEE, Valentia Island, Co. Kerry, Ireland.

PORTMAHOMACK, Ross-shire. On Dornock Frith, E. coast of Scotland. A small tidal harb. Auth. Constituted by Act of Parliament 25 and 26 Vict. c. 105, with a pier 300ft long. Dry at LW; used by vessels drawing 10ft at HW.

Official.—Factor for Cadbolt, J. Young.

PORTMORE, Island of Colonsay, Hebrides. A safe harb., with a sandy beach, but with numerous off-lying rocks.

PORT MUCK, near Lough Larne, Co. Antrim, Ireland.

There is a fishery pier at this place.

PORT MULGRAVE, Yorkshire, between Whitby and Scarborough. Auth. Owners, Palmer's Shipbuilding Co. Used by their vessels for the shipment of ironstone.

PORT NA HAVEN, Island of Islay, Hebrides. A shelter for fishing vessels.

PORT NA LONG, Oronsay, Hebrides. There is a narrow inlet on the W. side two-thirds of a mile long, with a sandy beach, where boats can find ample security.

PORTOBELLO. A pleasant seaport and watering place, 3 miles E. of Edinburgh. Ry. N.B.

PORT ORIEL, Co. Louth, Ireland. There is a fishery pier at this place.

PORTPATRICK, Wigtownshire, Scotland. Lat. $54^{\circ} 50' 20''$ N; long. $5^{\circ} 7' 2''$ W. No harb. authority. Ry. C. Was formerly a good harb., but is now decayed and fallen into disuse. A lifeboat station. THW. f. and c. 11h 10m.

PORT PENRHYN. (See Bangor.) Lat. $53^{\circ} 13'$ N; long. $4^{\circ} 10'$ W. Dry at LW. 13ft HWST.

A private port belonging to Lord Penrhyn.

Official.—E. A. Young, Agent to Lord Penrhyn.

PORT QUIN, N. Coast of Cornwall. A small harbour available for small craft.

PORTREATH, Cornwall. Lat. $50^{\circ} 15'$ N; long. $5^{\circ} 17'$ W. Auth. The Trustees of the late A. F. Basset, Esq., of Tehidy, Camborne; leased to the Messrs. Williams, Portreath Co., and used by them for importing coals. Accn. A tidal port, dry at LW. No. 1 Dock, 195×105 ft; No. 2 Dock, 279×95 ft; No. 3 Dock, 180×150 ft. En. 26ft wide. D. 17ft HWST.; 10ft HWNT. There are 3 jetties in the docks.

PORTREE, Inverness-shire. Raasay Sound, Island of Skye. Lat. $57^{\circ} 24'$ N; long. $6^{\circ} 7'$ W. A spacious harb. with good anchorage.

PORTRUSH, Londonderry. Auth. Harb. Board, under Act 7 and 8 Geo IV. A harb. used by coasters. D. at entrance 10ft LW. A lifeboat station.

PORTSEA.—See Portsmouth.

PORT ST. MARY.—See Isle of Man.

PORT SCALLOMEE, near Cape Wrath, Sutherlandshire. There is a quay at this place in 6ft LW.

PORT SETON, Haddingtonshire, Frith of Forth near Cockenzie. D. HWS. 16ft; IWN. 12ft.

Official.—Clerk to Commrs., R. Ovens.

PORT SKERRA, near Thurso, Caithness. A fishing station between Armadale Port and Sandside Harb.

PORTSMOUTH, Hampshire. Lat. 50° 48' N ; long. 1° 6' W°
Pop. 127,989. Auth. Lord Commissioners of the Admiralty ; the Portsmouth Corporation own the *Camber* and *Flat*house Wharves, under Acts 2 and 3 Vict. c. 72, and 31 and 32 Vict. c. 128. THW. Dockyard 11h 41m ; Sp. rise 12½ft ; N. rise 10ft. D. of water ST. 30ft ; N. 17½ft. W. prev. SW. ; most dangerous S. Rys. L. & S.W. and L.B. & S.C. Tr.—I. Timber, coal, grain, guano, and Government stores ; E. Government stores, grain, &c. LV. 1,350 tons. Accn. Portsmouth is the chief naval station of England. The Royal Dockyard covers an area of 500 acres. En. to harb. about ½ mile wide, and extends several miles N., between the W. side of Portsea Island and the mainland, gradually widening out until near the northern shore it is about 3 miles. Harbour affords ample accn. for the largest man-of-war. Crane power, two 10 tons and one 5 tons. Shear legs 30 tons.

	Length.	Breadth	Depth of Water o'er Blocks	
	ft.	ft.	ft. OST.	ft. ONT.
Camber Dry Dock	349½	{ of Caisson 70 ,, Entrance. 50 }	17½	14

	Length.	Breadth.	H. of T.	
			ST.	NT.
	ft.	ft.	ft.	ft.
Corporation Graving Dock ..	349	50	17½	14
Camber Heaving up Slip	500	30	12	9
Crampton's Patent Slip No. 1	112	22	8	4
" " " 2	70	23	8	4

Charges.—Harb. dues according to size. Tonnage dues 2d 3d, and 4d. ton.

Pilotage.—District. From the Owers, within and without the Isle of Wight, to Peverell, and *vice versa*, and to and from, and into and out of all ports and places within those limits, excepting those within the Poole and Southampton districts. Rates :—

	17ft. and under.	Above 17 and not ex. 20ft.	Upwards of 20ft.
	Foot. s. d.	Foot. s. d.	Foot. s. d.
From beyond one mile from Needles Point, and <i>vice versa</i> , to Portsmouth Harb. above the Swing Bridge	7 6	9 6	11 6
From beyond one mile from Needles Point, and <i>vice versa</i> , to Portsmouth Harb., below the Swing Bridge, or Langston, or Lymington Harbs.	7 0	9 0	11 0
From beyond one mile from Needles Point, and <i>vice versa</i> , to Spithead, Motherbank, Stoke's Bay, Cowes Roads, or to a line drawn from the Lepe Buoy to Lee Point	5 6	6 6	7 6
From beyond one mile from Needles Point, and <i>vice versa</i> , to Yarmouth, or Lymington Roads, for ships anchoring or remaining thereat	2 6	3 0	3 6
From beyond one mile from Needles Point, and <i>vice versa</i> , to St. Helen's	6 6	7 6	8 6
From within one mile of the Needles Point, and <i>vice versa</i> , to Portsmouth Harb., above the Swing Bridge.....	6 6	7 6	9 6
From within one mile of the Needles Point, and <i>vice versa</i> , to Portsmouth Harb., below the Swing Bridge, or Langston, or Lymington Harbs	6 0	7 0	9 0

	Foot. a. d.	Foot. a. d.	Foot. a. d.
From within one mile of the Needles Point, and <i>vice versa</i> , to Spithead, Motherbank, Stoke's Bay, Cowes Roads, or to a line drawn from the Lepe Buoy to Lee Point . . .	4 6	5 6	6 6
From within one mile of the Needles Point, and <i>vice versa</i> , to Yarmouth or Lymington Roads, for ships anchoring and remaining thereat . . .	2 0	2 6	3 0
From within one mile of the Needles Point, and <i>vice versa</i> , to St. Helen's . . .	5 6	6 6	7 6
From between the Needles Point and Hurst Castle, and <i>vice versa</i> , to Portsmouth Harb., above the Swing Bridge . . .	4 6	5 6	6 6
From between the Needles Point and Hurst Castle, and <i>vice versa</i> , to Portsmouth Harb., below the Swing Bridge, or Langston, or Lymington Harbs. . .	4 0	5 0	6 0
From between the Needles Point and Hurst Castle, and <i>vice versa</i> , to Spithead, Motherbank, Stoke's Bay, Cowes Roads, or to a line drawn from the Lepe Buoy to Lee Point . . .	2 6	3 6	4 6
From between the Needles Point and Hurst Castle, and <i>vice versa</i> , to Yarmouth or Lymington Roads, for ships anchoring and remaining thereat . . .	1 0	1 6	2 0
From between the Needles Point and Hurst Castle, and <i>vice versa</i> , to St. Helen's . . .	3 6	4 6	5 6
From between Hurst Castle and Newtown Creek, and <i>vice versa</i> , to Portsmouth Harb., above the Swing Bridge . . .	3 6	4 6	5 6
From between Hurst Castle and Newtown Creek, and <i>vice versa</i> , to Porton Langston, or Ly . . .	3 0	4 0	0
From between Hurst Castle and Newtown Creek, and <i>vice versa</i> , to Spithead, Motherbank, Stoke's Bay, Cowes Roads, or to a line drawn from the Lepe Buoy to Lee Point . . .	2 6	3 0	6
From between Hurst Castle and Newtown Creek, and <i>vice versa</i> , to St. Helen's . . .		3 6	6
From beyond one mile seaward of the Needles Point, and <i>vice versa</i> , to Portsmouth Harb., above the Swing Bridge . . .	2 6	3 0	6
From beyond one mile seaward of the Needles Point, and <i>vice versa</i> , to Portsmouth Harb., below the Swing Bridge, or Langston, or Lymington Harbs. . .	6 6	7 6	6
From beyond one mile seaward of the Needles Point, and <i>vice versa</i> , to Spithead, Motherbank, Stoke's Bay, Cowes Roads, or to a line drawn from the Lepe Buoy to Lee Point . . .	6 6	7 6	9 6
From beyond one mile seaward of the Needles Point, and <i>vice versa</i> , to Spithead, Motherbank, Stoke's Bay, Cowes Roads, or to a line drawn from the Lepe Buoy to Lee Point . . .	6 0	7 0	9 0
From beyond one mile seaward of the Needles Point, and <i>vice versa</i> , to Spithead, Motherbank, Stoke's Bay, Cowes Roads, or to a line drawn from the Lepe Buoy to Lee Point . . .	4 6	5 6	6 6
From within one mile seaward of the Bembridge Ledge Buoy, and <i>vice versa</i> , to St. Helen's Roads, for ships anchoring and remaining thereat . . .	2 0	2 6	3 0
From within one mile seaward of the Bembridge Ledge Buoy, and <i>vice versa</i> , to Yarmouth or Lymington Roads . . .	5 6	6 6	7 6
From Spithead, Motherbank, Stoke's Bay, or Cowes Roads, and <i>vice versa</i> , to Portsmouth Harb., above the Swing Bridge . . .	2 6	3 6	4 6
From Spithead, Motherbank, Stoke's Bay, or Cowes Roads, and <i>vice versa</i> , to Portsmouth Harb., below the Swing Bridge, or Langston, or Lymington Harbs. . .	2 0	3 0	4 0
From Spithead, Motherbank, Stoke's Bay, or Cowes Roads, and <i>vice versa</i> , to St. Helen's, or to a line drawn from the Lepe Buoy to Lee Point . . .	1 6	1 6	1 6
From Cowes Roads, and <i>vice versa</i> , to Cowes Harb. . .	1 6	1 6	1 6

Officials.—Town Clerks, R. and P. Miller, Queensferry

QUEEN'S FERRY.—River Dee (See Chester).

• **QUEENSTOWN.**—See Cork.

QUOILE, co. Down, Ireland. Auth. Owner, J. Mulholland, Esq., DL. A small harb. accommodating vessels up to 130 tons. 1ft deep at LW Upper quay, 10ft HWST., 8ft HWNT.; lower quay, 13ft HWST., 9ft 6in HWNT. W. prev. NW. Crane power to 5 tons.

Charges.—2d per ton reg. on cargo in or out; 3d per ton reg. on cargoes in and out; 2/6 plankage on all vessels. Vessels from foreign parts discharging at Hare Island 3d per ton reg. 3/ for use of beam and scale, none other permitted to be used.

Official.—Harb. Master, M. T. Orr.

Hotel.—"Down Hunt Arms."

RAMELTON. A creek under Port of Donegal. D. HWST. 11ft, HWNT. 7ft.

Official.—Coastguard Officer, W. H. Blight.

RAMSEY.—See Isle of Man.

Hotels.—"Mitre," "Albert."

RAMSGATE, Kent. Lat. $51^{\circ}19'42''$ N; long. $1^{\circ}25'23''$ E. Pop. 22,683 Auth. Board of Trade. P. NC. THW. f. and c. 11h 20m; OSp. rise 20ft; N. rise 15ft (increased 2ft with N. winds; much affected by winds). W. prev. S. to W. Rys. L.C. & D. and S.E. Tr.—I. Fish and general merchandise; E. General merchandise. LV. at HWST. 1,000 tons. Fishing smacks, luggers, and other small craft can come in at LWST., but other vessels such as barques, brigs, schooners, and steamers of greater draught wait for increased depth of water. Accn. The harb. consists of an outer harb. formed by stone piers extending 437yds into the sea, and enclosing an area of 42 acres, and an inner harb. or basin divided from the outer harb. by a stone cross-wall. En. about 208ft wide between pier heads, the depth here is 20ft HW., and 5ft LWST., with 16ft at HWNT. Close to the E. pier end, vessels of 8ft draught may lie afloat or go in and out except at low ebb; depths much influenced by winds. In outer harb. are gullies about 140ft wide, close to and parallel with the piers on which vessels are safely moored alongside each other in tiers, depth from 3ft to 5ft at LW. Vessels load and unload in inner harb., which is 1,520ft long, 500ft wide at centre and 350ft at each end, and has 14 to 10ft of water. E. entrance 29½ft wide; W. 40ft wide. D. on sill of each, 15ft HWST., and 10 to 12ft NT. There is a patent slip 500ft long, 22ft wide, with a depth of 20ft ST., and 15ft NT. Good warehouse and cranage accommodation.

Charges.—Rates on vessels entering harb. 4d and 6d ton. Dues on goods. Cranage. Hawsters.

Pilotage.—See London District.

Towage.—Out clear of the harb., under 25 tons 2/; over 25 and under 50, 5/; over 50 and under 100, 10/; for every additional 100 tons up to 500 tons 5/; 500 and under 600 tons 40/6; 600 tons and upwards 45/; if towed out through Chudd Channel, or to the North Brake Buoy, or an equal distance to the anchorage in Ramsgate Roads, double these rates. To or from beacon off Sandwich Haven, double the above rates. From the harb. to the Downs (with effective ships and in moderate weather), under 200 tons £5; 200 and under 600 tons, for each 100 tons additional £1; 600 tons and upwards £10. Disabled vessels and ships from the Downs, to and from all other

places, as per agreement, or arbitration. From one part of the harb. to another, the next rate below her tonnage. Vessels find their own tow-ropes, but vessels not having any, or having such as cannot be depended upon, and using those belonging to the harb., under 100 tons 10/; 100 and under 300, 15/; for every additional 500 tons 5/ per tide. The steam tugs are available at the above rates only at such times as they are not required for the purposes of the harb., and at the discretion of the harb. master.

Officials.—Harb. Master, Capt. E. Jones; Coll. of H. M. Cust., F. Cook.

Hotels.—"Granville," "Castle," "Royal Oak."

RATHLIN ISLAND, Co. Antrim, Ireland. Lat. $55^{\circ} 18' 10''$ N; long. $6^{\circ} 10' 45''$ W. There is a good harb. at Church Bay, at SW. of island.

RAVERGLASS. A small channel near Whitehaven, near the mouth of the Esk. Small vessels discharge on the beach.

REDBRIDGE. A creek of Port of Southampton. The L. & S.W. Railway have warehouse and crane accommodation at this place.

RENFREW HARBOUR, at the mouth of the Cart, River Clyde. Auth. Town Council, under Act 1853, and Cart Navigation Bill, 1890. Accn. Harb. 660ft \times 70ft wide. D. LW. 4ft, HWS. 16ft, HWN. 12ft. A stone quay 220ft long, and a wooden wharf 440ft long, both on the W. side. Used by coasters and steamers when fitting machinery. There is a 30-ton steam crane. W. prev. SW. *Renfrew Wharf* belongs to the Glasgow and South Western Ry.; length 345ft, D. 10ft LW. Used by Co.'s boats for passengers and goods.

Charges.—Table of Rates forwarded on application.

Officials.—Town Clerk, W. Herron; Harb. Master, D. McKenzie; Sec., J. Moston, Glasgow.

RESTRONGUET, A creek between Truro and Falmouth. D. HWST. 13ft HWNT. 11ft.

Official.—F. J. Williams, G. W. Railway Office, Devoran.

RHYL, Chester. D. HWST. 15ft, HWNT. 8ft.

Official.—Harb. Master, J. Wright.

RING, Upper and Lower, Co. Cork, Ireland. *Upper*: A pier belonging to the Grand Jury of Co. Cork. Dry at L.W., 12ft at H.W. D. on bar 10ft. Used by vessels up to 100 tons. *Lower*: A free pier 240ft long, with 13ft LW. Used by vessels up to 220 tons.

ROBIN HOOD'S BAY, York-shire. Vessels discharge on beach. D. HWST. 15ft, HWNT. 11ft.

ROCHESTER, Kent. On the river Medway. Lat. $51^{\circ} 24' N$; long. $0^{\circ} 29' E$. Pop. 21,307. Auth. Medway Conservators, under Act, 1881. P. NC. Ry. S.E. (Strood) L.C. & D. Tr.—I. Coal, corn, timber, and general stores; E Cement and general merchandise. Accn. River can be navigated at any time, and when the wind is from any quarter. Gill's Patent Slip 130 \times 28ft. H. of T. ST. 7ft 11in; N. 4ft 8in. Gridiron 100ft long. For vessels drawing 20ft in Limehouse and Bridge Reaches—some of the berths being 400ft. The Commissioners are deepening these berths.

Charges.—Harb. and port dues. Coal 5d reg. ton, oats 10d. grain or seeds other than oats 7d. Anchorage 2/ each vessel; moorage 2/.

Towage.—By agreement.

Officials.—Clerk to Conservancy Board, R. Prall ; Harb. Master, Capt. Wildash ; Coll. of Tolls, D. Freeland ; Coll. at Sheerness, E. W. Brightman ; Coll. of H.M. Cust., C. Costello.

Hotels.—"Bull," "Royal Crown."

ROCHFORD, Essex. A port attached to Leigh, under the Port of London. Situated on the Roche, 4 miles N. of Southend. D. HWST. 9ft, HWNT. 6ft.

Official.—Cust. Officer, T. H. Barbrook.

ROGERS TOWN PIER, Co. Dublin. On the River Rogers-town, 9 miles N. of Howth. **Auth.** Owner, T. Carey, of Rush. Used by boats up to 40 tons.

Charges.—Dues 1d per ton.

ROSEHEARTY, Aberdeenshire. Lat. $57^{\circ} 42' N$; long. $2^{\circ} 6' 30'' W$. THW. f. and c. 12h om. **Auth.** Commrs. under Act 38 and 39 Vict. 1875. There are two Harbs., the Western and the Eastern, or Port Rae Harb. The W. pier is 285ft long, carried into 13ft ST. ; area of harb. is about 2 acres. Port Rae pier is 600ft long, carried into 10ft at HW. Boats are drawn up by a steam engine. W. prev. from NW. round to E. northerly.

Charges.—4d per ton reg. on all vessels loading or unloading ; 2d per ton on vessels windbound.

Pilotage.—3d per ton, with extra for men on piers.

Officials.—Clerk, C. Stevenson ; Harb. Master, A. Ritchie.

Hotel.—"Forbes Arms."

ROSS, Co. Cork. A pier in Bantry Bay, under authority of Grand Jury.

Official.—Harb. Const., J. Smyth.

ROSS, NEW.—See New Ross.

ROSSCARBERY, Co. Cork. Rosscarbery Bay. Unsuitable for ships, being silted up.

ROSSLARE, Co. Wexford, Ireland. In connection with Wexford and the railway system of Ireland. **Auth.** Commrs. under Prov. Order, 32 and 33 Vict., c. 61. **Accn.** Area 6 acres, formed by a pier and breakwater 1,800ft long, carried into a depth of 20ft LWST. D. at entrance 20ft LW., and 26ft at HWST. W. prev. S. and SW., but harb. is well sheltered. Cranes, one 10 ton and one 30 cwt. steam. A lifeboat station. Extension works are being carried on.

Official.—Sec., H. E. Wynne.

ROSTREVOR, Co. Down, Ireland. Carlingford Bay. **Auth.** Owner, The Hon. A. S. G. Canning. **Accn.** A pier 120ft long ; width 9 to 12ft at HW. ; dry at LW. W. prev. WNW.

ROTHESAY, Island of Bute. On NE. coast of island, and affording a good anchorage. Quay 600ft. D. 9 to 14ft LW., and 17 to 22ft HW. Used by vessels drawing 12ft. There is a 4 ton crane.

RUNCORN. On the Mersey. Lat. $53^{\circ} 20' N$; long. $3^{\circ} 16' W$. Pop. 17,000. **Auth.** *Bridgwater & Old Quay Docks* ; Bridgwater Nav. Co. ; *Weston Point Docks* ; Weaver Trustees ; *Widnes Dock* ; L. & N.W. Ry. Co. ; *Ellesmere Port* ; Shropshire Union Ry. Ry. L. & N.W. *Westbank Dock*, a small dock belonging to the trustees of the late John Hutchinson. *Bridgwater Docks*, Manchester Ship Canal Co. Seven wet docks

and a gridiron 150 × 40ft., charge being 20/ for first day, and 15/ for each succeeding day. **D.** Sp. 16ft 6in, and **N.** 10ft. **Charges.** same as Liverpool **Pilotage** same as Liverpool. **Towage:** vessels with cargoes for the docks, towed free. *Weston Point Docks*, three, about 6½ acres. **W.** of **E.** 50ft. **D.** 19ft over sill **HWST.** **W.** prev. Westerly. These docks can only be entered at **HW.** **LV.** 300 tons. **Charges** 4d per ton dockage rates. *Widnes Dock* about 1½ acre. **W.** of **E.** 22ft. **D.** 12ft **ST.** **LV.** 180 tons. No vessels enter at **LW.** *Ellesmere Port Docks* about 3½ acres. **W.** of **E.** 33ft. **D.** about 14ft. Patent slip for vessels of 300 tons.

Charges.—Harbour dues, 1½d to 1¾d, dockage 4d per ton.

Towage.—Vessels loaded with cargoes for docks, free.

Officials.—*Bridgwater*, Agent, John Meadowcroft; Dock Master, W. Garnett; *Weston Point*, Gen. Man. Weaver Trust., T. B. Hughes; *Widnes*, Gen. Man. L. & N.W. Ry., G. Findlay; *Ellesmere Port*, Coll. of H.M. Cust., F. Samons.

Hotel.—"Royal."

RUSH, Co. Dublin. A tidal harb., with a pier with return end 110vds long. **Auth.** Owner, Sir R. Palmer. **D.** 10 to 14ft **HW.** **LV.** 120 tons coal laden.

RYDE, Isle of Wight. Lat. 50° 44' 25" N; long. 1° 9' 20" W.

A railway pier, 788vds long, carried out to 10ft **LWST.**

Auth. The Ryde Pier Co. **W.** prev. **SE.**

RYE, Sussex. Situated on the Rother. Lat. 50° 8' N; long. 0° 7' 44" E. **THW.** f. and c. 11h 20m. **D.** at **LWST.** is about 2ft, and 18ft at **HWST.** Nearly all the works connected with the port are in fair condition; the entrance, formerly blocked up by sand, is now decidedly better. **W.** prev. and most dangerous **S.** to **W.** The largest vessels entering have been 13ft dft. **Auth.** Harb. Commrs., executing the office of the Lord High Admiral, under Statutes 1 Wm. IV, c. 135, and 3 Wm. IV., c. 67. A lifeboat station.

Charges.—8d per ton reg.; ships seeking refuge 2/6 per mooring post.

Officials.—Clerk, Wm. Dawes; Harb. Master, Wm. Geo. Rubie.

Hotels.—"George" and "Cinque Port Arms."

ST. AGNES.—See Scilly.

ST. ANDREWS, Fifeshire. Lat. 56° 20' N; long. 2° 47' W. 39 miles NE. of Edinburgh. **Ry.** N.B.

THW. f. and c. 2h 20m. **Auth.** Town Council. **Accn.** Outer harb. 228ft × 300ft has an entrance 60ft wide, and the inner harb. 560 × 134 has an entrance 29½ wide. **En.** dries at **LW**, and **D.** at **HW.** is about 13ft in the Lower Harb. and 11ft in the Upper Harb. Vessels of 400 tons enter at **HWST.** **W.** most dang. **NE.** to **SE.**

Charges.—2d per ton reg.

Pilotage.—Coastwise 3d per ton reg. in and out. Foreign 5d per ton in and out.

Officials.—Town Clerk, S. Grace, Esq. Harb. Master, James Deas.

Hotels.—"Cross Keys," "Royal Hotel," "Alexandra," "Marine," "St. Regulus," and "Imperial."

ST. AUBINS.—See Channel Islands.

ST. DAVID'S, Fifeshire. Frith of Forth. **Auth.** Trustees of the late G. W. Henderson. **Accn.** A small harb. used by vessels of light draught entering from half flood. **W.** prev. **W.**

Charges.—Dues 1d per ton.

ST. HELEN'S, Isle of Wight. A tidal harb. D. HWST. 15ft, HWNT. 11ft. 10 ton crane.

Official.—Rec. and Man., F. M. Coldwells.

ST. HELEN'S POOL.—See Scilly.

ST. HELIER.—See Channel Islands.

ST. IVES, Cornwall. Lat. $50^{\circ} 12' N$; long. $5^{\circ} 28' W$. Auth. Corporation, under Acts 1853, 1862, and 1886, and order of 1888. THW. f. and c. 5h om. Accn. Harb. protected by a breakwater 500ft long. Area sheltered is about $5\frac{1}{2}$ acres. Dry at LWST. Vessels of 400 tons enter at HW. D. at HWST 18ft at pierhead. W. prev. S to W. and most dang. NNE. to E.

Officials.—Harb. Master, S. Barber.

Hotels.—"Tregenna Castle," "Western," "Queen's," and "White Hart."

The stone pier is being extended 280ft true south from the seaward end.

ST. JUST POOL. A creek under Port of Falmouth.

Charges.—Same rates.

ST. MARGARET'S HOPE, Orkneys. A creek under Kirkwall in the I. of S. Ronaldsha.

ST. MARTIN'S.—See Scilly.

ST. MARY'S.—See Scilly.

ST. MAWES, Cornwall. Lat. $50^{\circ} 9' N$; long. $5^{\circ} 0' W$. Auth. Pier and Harb. Co., under Act 17 and

18 Vic. Accn. 9 to 14ft LWST, but there is only 1ft at LW at pier head. LV. 300 tons. THW. 5h 7m.

ST. MICHAEL'S MOUNT, Cornwall. A granite rock in Mount's Bay. Harb. dries at LW. D. at HWST 15ft. W. prev. W., most dang. SSE. to WSW. Auth. Owner, Sir John St. Aubyn.

ST. MONANCE, or St. Monans, Fifeshire. Frith of Forth.

Lat. $56^{\circ} 12' 30'' N$; long. $3^{\circ} 46' 15'' W$.

Auth. Corporation, in virtue of a Feu Charter by Wm. Sandelandis, of St. Monance, dated 28 Oct., 1622, and Sasine thereon of the same date, and recorded in the General Register of Sasines 30 Oct., 1622. A small harb. used principally by fishing boats, dry at LW. W. prev. and most dang. E and SE.

ST. PETER'S PORT.—See Channel Islands.

ST. SAMPSONS.—See Channel Islands.

SALCOMBE, Devonshire. Lat. $50^{\circ} 13' N$; long. $3^{\circ} 46' W$.

Ry. G.W. in course of construction. Auth. Commissioners, by lease from Duchy of Cornwall for 21 years from June 1882. Accn. 11ft on bar LWNT and 6ft at LWST, 19ft at HWNT, and 24ft at HWST. W. most dang. SE., S. and SW. THW. f. and c. 5h 41m. Ample quayage both at Salcombe and at Kingsbridge, 4 miles up the estuary. A lifeboat station. Steamers carrying passengers and cargo twice a week to Plymouth.

Charges.—None.

Official.—Harb. Master, Wm. Cook.

Hotel.—"Marine."

SALTCOATS, Ayrshire. On the Clyde. Ry. G. and S. W. Tr. Export trade in coals and salt.

SALTERNS WHARF, Dorsetshire. A wharf in Pool Harb.

SALTFLEET, Lincolnshire. 33 miles NE. of Lincoln. A place much decayed. Dry at LW. W. prev.

NNW. to SE. THW. f. and c. 5h 45m. A lifeboat station.

SALTNEY (See Chester). Railway wharves belonging to the G W. Ry. Co.

SANDA, Orkneys, in Sanda Island. Auth. Orkneys Steam Nav. Co., under Prov. Order. Accn. A stone pier, 200ft long, carried out to 6ft LWST. W. prev. SE., most dang. SW.

SANDICROFT (see Chester). A small dock and wharf on the River Dee belonging to the Sandicroft Foundry Co.

SANDHAVEN, Aberdeenshire. 2 miles from Fraserburgh. Auth. The Hon. J. Forbes Trefusis, under Prov. Orders of 1873 and 1881. Accn. Area 14 acres. D. at entrance 3 to 11ft, according to tide.

SANDESEND. A creek under the Port of Whitby

SANDSIDE HARBOUR, W of Thurso, Caithness. A small harb. with two good piers. Dry at LW.

SANDWICH, Kent. 11 miles E. of Canterbury. Auth. Corporation, under Act 1847. Harb. is much choked, and has lost its importance. The channel is narrow and tortuous, and only available for vessels of 12ft. draught. W. most dang. SE., S. and W. In Saxon times this was the most important port in England.

SAUNDERSFOOT, Pembrokeshire. Lat. $51^{\circ} 43' N$; long. $4^{\circ} 42' W$. Ry. Pembroke and Tenby. Auth. Owner, C. R. Vickerman, Esq., of Hean Castle, under Act 10 Geo. IV., c. 108. Accn. A small tidal harb. used by coasters up to 400 tons, and having a depth of 17ft at HWST. and 10ft at HWNT. Good quayage, with 3-ton crane.

Charges.—Harb. dues 2d per ton reg.

Pilotage.—As per agreement, about 10/ per 100 tons.

Official.—Harb. Master, E. J. Harvey.

Hotel.—“Hean Castle.”

SCALLOWAY. A creek under Port of Lerwick, W. coast Scotland. D. HWST. 24ft; HWNT. 17ft.

THW. f. and c. 9h 30m.

Official.—Coll., O. Jamieson.

SCARBORO', Yorkshire. Lat. $54^{\circ} 18' N$; long $0^{\circ} 25' W$. Pop. 30,504. Auth. Harb. Commissioners, under Acts 1843 and 1876. P. NC. THW. f. and c. 4h 11m; Sp. rise 15ft; N. rise 9ft; R. of N. $8\frac{1}{2}$ ft. D. Entrance dry at ST. W. prev. SW.; most dangerous SE. to E. Ry. N.E. Tr.—I. Timber and ice. LV. ss. 715 reg. tons; dft. of largest sailing vessel $15\frac{1}{4}$ ft. Accn. The harb. is formed by the E. Old or Vincent and W. piers enclosing two independent harbs., the outer of $5\frac{1}{2}$ acres, the inner of 9 acres. The bottom throughout is fine sand. Both harbs. are dry at LW. At ST. there is about 18ft of water. Vessels of 12ft dft. can enter and be berthed during ST., and those of 9ft during NT. En.—Outer Harb., boom entrance NE. $\frac{1}{4}$ E., 33ft wide, bridge entrance E. by S. $\frac{3}{4}$ S., 33ft wide; Inner Harb., NE. $\frac{1}{4}$ N., 10ft wide. There is also a floating dock 90ft long, $33\frac{1}{2}$ ft wide, with 13ft ST., and 8ft NT. Both harbours are dry at LW., and vessels should not charter for this port unless prepared to take the ground whether at a quay, berth, or other.

Charges.—Harb. dues under 50 tons 2d per ton, over 50 tons 3d per ton. Dues on coal landed 6d ton. Corporation dues 1/6 each vessel. Coal delivered $7\frac{1}{2}$ d ton. Vessels in ballast sheltering 1d per ton.

Pilotage.—District not defined. Rates as per agreement. No fixed rate. Usual charge 10/ to £1 10s, according to size.

Towage.—1/ per keel.

Officials.—Clerk to Commrs., J. Stephenson; Harb. Master, W. Shaw; Coll. of H.M. Cust., J. M. Cumberland.

Hotels.—"Queen's," "Royal," "Grand," "Castle," &c.

SCHULL, Co. Cork. (See Skibbereen.) 8 miles NE. from Fastnet Rock. A safe harb., sheltered from SW. to SE. Anchorage is from 18ft to 21ft.

Official.—Harb. Const., D. W. O'Regan.

SCILLY. A group of islands 24 miles W. of Land's End. Lat. $49^{\circ} 51'$ and 50° N; long. between $6^{\circ} 11'$ and $6^{\circ} 30'$ W. Pop. 2,000. P. NC. THW. f. and c. 4h 30m; Sp. rise 16ft; N. rise 12ft; Equinoctial tides rise 20ft. D. LWST. 15 to 30ft; LWM. 18ft to 33ft. Tr.—I. Timber, coals, flour, bread, and general merchandise; E. Potatoes and lobsters. Accn. The Scilly Islands consist of 48 islands, but of these only five, viz.: —*St. Mary's*, *St. Agnes*, *St. Martin's*, *Tresco*, and *Bryer* are inhabited. These five islands possess several harb. for vessels capable of taking the ground, and also one for ships of large dft., viz., *St. Mary's Road*. This harb. affords shelter from all winds, except those from the westward between WNW. and SW. The anchorage here is between the island of St. Mary and that of Samson, and has five entrances. The general depths are from 6 to 13 fathoms. The other harb. of note are *Old and New Grimsby* and *St. Helen's Pool*.

Charges.—Anchor dues $2/4$ per vessel. Keelage 1d per ton.

Pilotage.—District. To and from, into and out of, all ports and places in and about the islands of Scilly. Rates. On vessels from or bound to Foreign Ports of 60 tons and under, £2 2s; 70 tons, £2 4s 6d; 80, £2 7s; 90, £2 9s 6d; 100, £2 12s 6d; 110, £2 15s 10d; 120, £2 19s 2d; 130, £3 2s 6d; 140, £3 5s 10d; 150, £3 9s 2d; 160, £3 12s 6d; 170, £3 15s 10d; 180, £3 19s 2d; 190, £4 2s 6d; 200, £4 4s; 210, £4 7s 4d; 220, £4 10s 8d; 230, £4 14s; 240, £4 17s 4d; 250, £5 0s 8d; 260, £5 4s; 270, £5 7s 4d; 280, £5 10s 8d; 290, £5 14s; 300, £5 15s 6d; 310, £5 16s 6d; 320, £5 17s 6d; 330, £5 18s 6d; 340, £5 19s 6d; 350, £6 0s 6d; 360, £6 1s 6d; 370, £6 2s 6d; 380, £6 3s 6d; 390, £6 4s 6d; 400, £6 6s; 410, £6 10s; 420, £6 14s; 430, £6 18s; 440, £7 2s; 450, £7 6s; 460, £7 10s; 470, £7 14s; 480, £7 18s; 490, £8 2s; 500, £8 6s; 510, £8 9s; 520, £8 12s; 530, £8 15s; 540, £8 18s; 550, £9 1s; 560, £9 4s; 570, £9 7s; 580, £9 10s; 590, £9 13s; 600, £9 16s; 610, £9 18s 6d; 620, £10 1s; 630, £10 3s 6d; 640, £10 6s; 650, £10 8s 6d; 660, £10 11s; 670, £10 13s 6d; 680, £10 16s; 690, £10 18s 6d; 700, £11 1s; 710, £11 3s; 720, £11 5s; 730, £11 7s; 740, £11 9s; 750, £11 11s; 760, £11 13s; 770, £11 15s; 780, £11 17s; 790, £11 19s; 800, £12 1s; 810, £12 2s 6d; 820, £12 4s; 830, £12 5s 6d; 840, £12 7s; 850, £12 8s 6d; 860, £12 10s; 870, £12 11s 6d; 880, £12 13s; 890, £12 14s 6d; 900, £12 16s; and an additional 1s for every 10 tons above 900. On Coasting Vessels of 60 tons and under £1; 70 tons, £1 2s 6d; 80, £1 5s; 90, £1 7s 6d; 100, £1 10s; 110, £1 12s 6d; 120, £1 15s; 130, £1 17s 6d; 140, £2; 150, £2 2s 6d; 160, £2 5s; 170, £2 7s 6d; 180, £2 10s; 190, £2 11s; 200, £2 12s 6d; 210, £2 15s 10d; 220, £2 19s 2d; 230, £3 2s 6d; 240, £3 5s 10d; 250, £3 9s 2d; 260, £3 12s 6d; 270,

£3 15s 10d ; 280, £3 19s 2d ; 290, £4 2s 6d ; 300, £4 4s ; and in proportion for a greater tonnage. No charge for less than 5 tons. For 5 tons and upwards, the next rate to be charged. For removing a vessel within the limits of the port, 10/6. For a pilot remaining on board a vessel by request 10/6 for every 24 hours, or any part thereof. The above rates are for the whole service, in and out, but any pilot employed to conduct a vessel inwards only, is entitled to two-thirds of the said rates, the vessel having been properly moored in one of the regular harbours.

Towage.—£5 per vessel, or 2½d per ton.

Official.—Steward, H. G. Allen.

Hotels.—"Tregarthen's," "Hugh House," "Atlantic," and "Telegraph."

SCRABSTER, Caithness, Thurso Bay. There are 2 piers for steamers drawing from 12ft to 20ft.

Official.—Harb. Master, A. Cormack.

SEAHAM HARBOUR, Durham. A seaport about 6 miles S. of Sunderland. Lat. 54° 50' N ; long. 1° 19' W. Pop. 8,000. Auth. The Marquis of Londonderry. P. N.C. THW. 3h 24m ; Sp. rise 15½ft ; N. rise 11½ft ; R. of N. 6½ft. D. Outer harb. HW. at ST. 15ft. W. prev. E. and NE. Ry. Seaham and Sunderland. Tr.—I. Pit-wood, staves, hoops, timber, &c.; E. Coal principally, chemicals, glass bottles, &c. LV. 850 tons burthen. No vessel can enter at LW. The En. to the harb. is formed by the E. and S. piers, and is 115ft wide. The harb. Accn. is altogether 12 acres, v.z.:—

	Area.	Width of entrance.	Depth of water.	
			HWST.	LWST.
	acres.	ft.	ft.	ft.
Outer Harb.	3½	115	15	
North Dock	3	33	17	
South Do.	2½	32	16	
Dry Harb.	3	40	12 to 13	Dries.

The Londonderry slip is 180ft long, 18½ft wide, with 12ft at ST. and 6½ft at NT.; cradle 78ft long, gridiron attached 180ft long. There is good cranes-power of from 5 to 10 tons.

Charges.—Light and harb. dues. Night watch, gas, hospital, Trinity dues, cooking, fresh water, weighing anchors, pier rope, moving vessels in dock, lifeboat.

Pilotage and Towage.—See Whitby.

Officials.—Principal Agent for Prop., J. B. Emerson, J.P. ; Harb. and Dock Man., W. Sheridan ; Ry. Man., G. Hardy.

SEATON-UNDER-LYME, Dorsetshire. No harb. works.

SELBY, Yorkshire. An inland port on the Ouse. Wharves and 4 hand cranes. D. HWST. 15ft ; HWNT. 10ft.

Official.—Station Master, J. Bradford Harper.

SHARPNESS, Gloucestershire. On the E. bank of the Severn, 16½ miles from the sea. Lat. 51° 53' N ; long. 2° 14' W. Pop. 36,520. Auth. Sharpness New Docks, &c., Company. P. N.C. THW. f. and c. 9h 45m ; Sp. rise 29ft ; N. rise 16ft. W. prev. There are no prevalent or dangerous winds affecting the entrance to this harbour. Rys. G.W. and M. Tr.—I. Timber, deals, sleepers, grain, seed, oilcake, marble, bones, potatoes, guano, ores, clay, &c.; E. Coal, salt, pitch, iron, manufactures, bricks, earthenware, &c. LV. 2,300 tons. Accn.

There is a tidal basin with an entrance 60ft wide. From this basin into the canal there is a ship lock 320ft long by 60ft wide; depth on sill 24ft. There are two piers, one 400ft the other 500 ft long, carried to end of foreshore of river. Area of harb., Sharpness 20 acres, Gloucester 14 acres; 4,000ft of quayage space. The above 14 acres, accommodation afforded by the new works are an addition to the old docks, and are approached by an entirely new entrance, the old one still remaining and in use. There is also about 16 miles of canal, which affords considerable additional area, and 1 mile of which is constantly used for the purposes of the timber trade. Docks, &c. :—

Name.	Length.	Width of floor.	Width of Entrance.	Depth of water on Sill, OHW.	Remarks.
	ft	ft.	ft. in.	ft. in.	
Sharpness D'ck	350	60	50 0	15 0	Opens into Floating Dock.
Gloucester N'w Dock	165	36	35 8	12 0	Do.
Do. Old	113	31	29 5	10 10	Do.

Crane power to 10 tons at Gloucester.

Charges.—Rates on vessels entering canal at Sharpness. Foreign and coasting. Regulations as to tonnage, wharfage, lockage, and moorage. Tonnage rates. Dock charges.

Pilotage.—District. The Bristol Channel east of Lundy Island, including the River Severn to the city of Gloucester, and the River Wye to Chepstow Bridge. Rates:—

	Under 100 Tons.	100 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 600.	600 and under 800.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
From Lundy to the Holmes or Cardiff Roads, and <i>vice versa</i>	1 10 0	2 0 0	2 7 6	2 15 0	3 5 0	3 15 0	4 5 0
From Lundy to Kingroad, and <i>vice versa</i>	2 0 0	2 10 0	3 0 0	3 10 0	4 2 6	4 15 0	5 7 6
From Lundy to Sharpness, and <i>vice versa</i>	4 0 0	5 0 0	6 0 0	7 0 0	8 5 0	9 10 0	10 15 0
From Nash Point or Minehead to the Holmes or Cardiff Roads, and <i>vice versa</i>	1 0 0	1 5 0	1 10 0	1 15 0	2 2 6	2 10 0	2 17 0
From Nash Point or Minehead to Kingroad, and <i>vice versa</i>	1 10 0	1 15 0	2 2 6	2 10 0	3 0 0	3 10 0	4 0 0
From Nash Point or Minehead to Sharpness, and <i>vice versa</i>	3 10 0	4 5 0	5 2 6	6 0 0	7 2 6	8 5 0	9 7 6
From the Holmes or Cardiff Roads to Kingroad, and <i>vice versa</i>	0 10 0	0 12 0	0 15 0	0 17 6	1 2 6	1 7 6	1 12 6
From the Holmes or Cardiff Roads to Sharpness, and <i>vice versa</i>	2 10 0	3 2 6	3 15 0	4 7 6	5 5 0	6 2 6	7 0 0
Kingroad to Sharpness.							
80 and under 100	2 0 0	2 10 0	3 0 0	3 10 0	4 2 6	4 15 0	5 7 6

	800 and under 1,000.	1,000 and under 1,200.	1,200 and under 1,400.	1,400 and under 1,600.	1,600 and under 1,800.	1,800 and above.
From Lundy to the Holmes or Cardiff Roads, and <i>vice versa</i> ..	£ s. d. 5 0 0	£ s. d. 5 15 0	£ s. d. 6 10 0	£ s. d. 7 5 0	£ s. d. 8 0 0	£ s. 8 15 0
From Lundy to King- road, and <i>vice versa</i> ..	6 5 0	7 5 0	8 5 0	9 5 0	10 5 0	11 5 0
From Lundy to Sharp- ness, and <i>vice versa</i> ..	12 10 0	14 10 0	16 10 0	18 10 0	20 10 0	22 10 0
From Nash Point or Minehead to the Holmes or Cardiff Roads, and <i>vice versa</i> ..	3 7 6	3 17 6	4 7 6	4 17 6	5 7 6	5 17 6
From Nash Point or Minehead to Kingroad, and <i>vice versa</i>	4 12 6	5 7 6	6 2 6	6 17 6	7 12 6	8 7 6
From Nash Point or Minehead to Sharpness, and <i>vice versa</i>	10 17 6	12 12 6	14 7 6	16 2 6	17 17 6	19 12 6
From the Holmes or Car- diff Roads to Kingroad, and <i>vice versa</i>	1 17 6	2 2 6	2 7 6	2 12 6	2 17 6	3 2 6
From the Holmes or Car- diff Roads to Sharpness, and <i>vice versa</i>	8 2 6	9 7 6	10 12 6	11 17 6	13 2 6	14 7 6
Kingroad to Sharpness— 80 and under 100	6 5 0	7 5 0	8 5 0	9 5 0	10 5 0	11 5 0

In lieu of the rates charged in the above schedule the following reduced rates shall be paid from Kingroad to Sharpness or Lydney for all vessels coming light *bond fide* for coal, and for all such vessels laden with coal from Sharpness or Lydney to Kingroad :—

	£ s. d.
Under 40 tons	0 13 0
40 tons and under 60 tons	0 15 0
60 " " 80 "	0 18 0
80 " " 100 "	1 0 0
100 " " 120 "	1 2 0
120 " " 150 "	1 4 0
150 " " 180 "	1 6 0
180 " " 200 "	1 8 0
200 " " 300 "	2 0 0
300 " " 400 "	2 10 0
400 " " 500 "	3 2 6
500 " " 600 "	3 15 6
600 " " 800 "	4 7 6
800 " " 1,000 "	5 5 0
1,000 " " 1,200 "	6 5 0
1,200 " " 1,400 "	7 5 0
1,400 " " 1,600 "	8 5 0
1,600 " " 1,800 "	9 5 0
1,800 and upwards	10 5 0

For pilots taken on board of any vessel inward bound to the westward of Ilfracombe, the same pilotage rates as from Lundy Island ; if between the Nash Point and Ilfracombe, the same rates as from the Nash Point ; if between the Nash Point and the Holmes, the same rates as from the Nash Point ; and if between the Holmes and Kingroad, the same rates as from the Holmes. For pilots discharged from any vessel on the outward voyage between any of the stages mentioned in the above rates, the same rates as if they had been taken to the next stage beyond the place where they were discharged. For all vessels piloted to Chepstow or to Lydney, the same pilotage rates as to Sharpness, and *vice versa*. For vessels piloted from Sharpness to Lydney, or from Lydney to Sharpness, and then to

Kingroad, the same rates as between Sharpness and Kingroad. For vessels piloted to and from any place in the river Severn above Sharpness, one-fourth more than the rates between Sharpness and Kingroad. All vessels bound to Lydney or Sharpness, or to any place in the river Severn above Sharpness, requiring and having the services of a pilot, shall also employ on board as assistants to the pilots from Kingroad, the following number of men, at the undermentioned charge:—All vessels of 200 and under 300 tons, 1 man at 7/6 for the first tide, and 2/6 for every other tide the vessel moves; 300 and under 500 tons, 2 ditto; 500 and under 700 tons, 3 ditto; 700 and upwards, 4 ditto. With English crews: 300 and under 500 tons, 1 man at 7/6 for the first tide, and 2/6 for every other tide the vessel moves; 500 and under 700, 2 ditto; 700 and upwards, 3 ditto. Any pilot who remains on any vessel by request after he has discharged the duties for which he was engaged, shall be paid 10/ a day or part of a day; and any pilot who shall be required to move any vessel in the dock, harbour, or river, occupying only one tide, shall be paid for any vessel under 300 tons, 5/; 300 and under 500, 7/6; 500 and under 800, 10/; 800 and upwards 12/6. Any pilot who shall be detained by request on any vessel in Kingroad, waiting for water up the river Severn; or outward bound in any roadstead on account of contrary winds, longer than 24 hours, shall be paid 10/ a day for each day's detention, in addition to the pilotage rates. In case any vessel shall be compelled to bear up and return from the westward from stress of weather or accident, the pilot in charge shall be entitled to one-third of the pilotage charge in addition, according to the distance such vessel may have reached before she shall put back. In addition to the foregoing charges, a clerk or collector's fee, as follows, viz.:—All vessels under 100 tons 6d; 100 and under 300 tons 1/; 300 and under 500 tons 1/6; 500 and under 800 tons 2/; 800 and upwards 2/6.

Towage.—For the whole length of the canal: under 30 tons reg. 8/6; above 30 tons and not ex. 150 tons 4d; above 150 tons —for 150 tons 4d, for the remainder 2½d ton each way.

Officials.—Sec., Dock and Canal Co., H. Waddy; Harb. and Pilot Master and Lloyd's Agent, Capt. D. Farrant, R.N.; Harb. Master and Lloyd's Agent (Sharpness), Capt. Calway; Coll. of H M. Cust., G. T. Luxton.

Hotels.—At Glo'ster, "The Albion;" at Sharpness, "Pearce's Railway."

SHEERNESS, Kent. Lat. 51° 26' 48" N; long. 0° 44' 22" E.

A seaport and naval station situated on the Island of Sheppey at the mouth of the Medway, 11m NE. from Chatham. Ry. LC. & D. The important government dockyard at this place has an area of about 60 acres. THW. at f. & c. 12h 39m

Hotels.—"Royal," "Royal Fountain."

SHETLAND ISLANDS, situated about 50m NE. of the Orkney Islands, and 210m from Bergen in Norway. Sunborough Head, the S promontory of the principal island, Mainland or Pomona, is in lat. 59° 49' N.; and the most northern point of Unst, the most remote of the group, is in lat. 60° 51'. The islands are about 30 in number, the principal being Mainland or Pomona, Yell, Unst, Whalsay, Bressa, East Burra, West Burra, Tronda, Fetlar, Papa Stour, Muckle Roe,

Housa, Mousa, and Fair Isle. Area about 558 square miles. The climate is wet and tempestuous, and the ports difficult of access.

SHIELDS, SOUTH (see North Shields and Newcastle), situated on the Tyne opposite N. Shields.

Ry. NE. The Corporation Quay is 210ft. long, with D. 17ft HW., and dry at LW.; 11 dry and 2 floating docks. Portable steam ballast crane and a 10 cwt. hand crane. A lifeboat station.

SHOREHAM. Lat. $50^{\circ} 49' 50''$ N; long. $0^{\circ} 15'$ W.

Pop. 3,750. Auth. Shoreham Harbour Trustees, under Acts of Parliament of 1816—1876 P. SC. THW. f. and c. in harb., 11h 20m; Sp. rise 16ft and N. rise 11ft above zero. There is generally a depth of 5ft below zero. W. prev. from SW., most dangerous SE. when blowing a gale. Ry. L.B. & S.C. Tr.—I. and E. General. LV. sailing vessel 1,422 tons, draught 16ft. Accn. The harbour is 4 miles long, and is formed by the outset of the river Adur between two piers. Width of entrance 176ft. It is divided by a third pier into the E. and W. arms. W. arm.—Depth of water 21ft HWST., 16ft HWNT. ST. range from 14ft to 16ft, NT. from 8ft to 11ft, above zero. Good wharves, chiefly used by colliers and timber-laden ships. E. arm.—21ft at HWST., 16ft at HWNT. From this arm there is a floating canal entered by a lock 175ft long, 32ft wide, with depth of water at HWST. $22\frac{1}{2}$ ft, LWST. $6\frac{1}{2}$ ft, HWNT. 17ft, and LWNT. $6\frac{1}{2}$ ft. Depth of canal 19ft HWST., 14ft HWNT. Vessels drawing 16ft can lie afloat inside the lock. The stream runs as much as 6 knots at Springs, and 3 knots at Neaps. There is in the harbour and under the direction and management of the harb. authority, quay space to the extent of 1,400ft frontage, besides this there are numerous private wharves having frontages to the harb. of about 2,500ft. The Adur slip is 420ft long, 54ft wide, and capable of taking a vessel drawing 11ft forward and 13ft aft. Gridiron, 152ft by 32ft wide.

Charges.—Harb. dues, vessels loading or unloading 3d to 6d ton according to size. Putting in for shelter 4/ each.

Pilotage.—District. From Brighthelmstone (exclusive) west ward to the Owers, and from the Owers eastward to Brighthelmstone (exclusive). Rates per foot. Inward and outward. Harb. pilotage, 8t dft. and under, 1/6d, above 8ft and not ex. 10ft, 1/9d; above 10ft, 3/. Vessels inward bound, not boarded until they are within the bar at the entrance of the harb., are charged only one-fourth of these rates. Ships going into Shoreham, and unloading near the harb. mouth, are subject to half-pilotage only; but if such ships are afterwards removed by pilots to any dock or wharf near the town, for the purpose of taking in a cargo, the full pilotage is to be paid.

Towage.—Rates for the use of the steam tugs plying within harb. limits, in and out of the harb. to and from Kingston, Shoreham, or the Lock:—Vessels under 60 tons reg., 12/6; vessels of 60 tons reg. and upwards, 2½d per ton reg.; towage one way (either in or out), one half of the above-mentioned rates; up and down the canal, 2d per ton reg.; up or down the canal, 1d per ton reg., with minimum charge of 5/. From the Lock to Kingston or Shoreham, or from Shoreham or Kingston to the Lock:—Vessels under 60 tons reg., 5/; vessels of 60 tons and under 100 tons, 8/; vessels of 100 tons and under 200 tons, 12/; vessels of 200 tons and upwards, 15/; moving a vessel in harb. other than as above mentioned, 5/; use of tow rope in or out of harb., 10/.

Nearest station, Dunmanway, on the W. Cork Ry. (16m). A small harb. ; the best entrance is through Baltimore Harb. Channel.

SKIPNESS, Cantire, Argyllshire. Auth. Owner R. C. Graham of Skipness. Accn. An iron pier with D. of 8ft at LWST.

SKIPPOOL, Lancaster. Creek of Fleetwood. D. HWST. 15ft. HWNT. 10ft.

SLIGO, Sligo, on the Garvogue, 5 miles from the outer roads.

Lat. $54^{\circ} 16' N$; long. $8^{\circ} 28' W$. Pop. 10,764. Auth. Harbour Commissioners, under Statute 40 Vict. c. 35, 1877. P. C. THW. f. and c. 5h 45m ; Sp. rise $11\frac{1}{2}$ ft ; N. rise 8ft. D. on bar at LW. $15\frac{1}{2}$ ft. W. prev. SW. Rys. Mid., G.W., & S.L. & N. Co. Tr.—General. LV. Vessels of 1,540 reg. tons and $21\frac{1}{2}$ ft dft. have entered the harb. at HW., and vessels of 390 reg. tons and 16ft dft. at LWST. Accn. Good and safe channel up to quays. The ballast quay is about 2,000ft long, with a depth of water alongside at LWST. of 8ft. Depth up to quays at ST. $16\frac{1}{2}$ ft ; NT. $13\frac{1}{2}$ ft. Hand cranes.

Charges.—Harb. dues 6d ton. Ballast 1s 6d to 2s 6d ton. Mooring buoys if used 3d per ton reg.

Pilotage.—District. From Wheaten Rock to Quays. Rates. Outwards : From any place to sea, April 1 to Sept. 30, 2/ ; Oct. 1 to Mar. 31, 2/6. From April 1 to Sept. 30, Wheaten Rock to Sligo, 2/6 foot inwards ; Sligo to sea, 2/ foot outwards. From Oct. 1 to Mar. 31, Wheaten Rock to Sligo, 3/ foot inwards ; Sligo to sea 2/6 foot outwards.

Towage.—5d per reg. ton in, and 3d out.

Officials.—Sec. and Coll. of Harb. dues, T J. Mercer ; Harb. Master, Capt. J. Keeble.

Hotels.—"Victoria" and "Imperial."

SOLVA. A small creek near Milford.

SOUTH ALLOA, River Forth, Scotland. A wharf belonging to the Cal. Ry. Co., used for landing coals and timber.

SOUTH BASIN, North Uist. Lat. $57^{\circ} 35' N$; long. $7^{\circ} 3' W$. A well-sheltered harb., with a pier having 7ft. at LW. alongside.

SOUTHAMPTON, Hampshire. On Southampton Water. Lat. $50^{\circ} 54' N$; long. $1^{\circ} 24' W$. Pop. 80,000. Southampton Water forms one of the finest harbours in the kingdom, being quite land-locked, and its approaches so protected that no sea of any consequence can rise. The largest ships arrive at and leave the harb. at all times of tide. The anchorage is remarkably good. There is a second high-water about two hours after the first, the knowledge of which is most important to the mariner. The first high-water at the full and change of the moon is at 10h 30m, the second high-water at 12h 45m, and low water at 4h. To ships using the graving docks this double tide is very advantageous, as the water remains nearly stationary for nearly two hours ; thus, without risk, allowing vessels to come out of the dock, and others to enter, without losing a tide. Auth. The Docks are the property of the Southampton Dock Company ; there are also Quays where vessels discharge which are under the jurisdiction of the Southampton Harbour Board, together with piers mostly used by passenger steamers to and from the Isle of Wight, &c. P. C. THW. 10h 30m, 0h 45m ; Sp. rise 13 ft ; N. rise $9\frac{1}{2}$ ft. D. at LWST.

of 10 acres, 20ft and 16 acres 18ft, 10 acres in close dock 28ft. W. prev. SW. ; owing to the land-locked nature of the harb. no winds are specially dangerous. Ry. L. & S.W. Tr.—I. Coffee, wine, tobacco, and all kinds of foreign and colonial produce ; E Machinery, hardware, and manufactured goods. LV. as follows :—

	Tons.		Tons.
<i>Saale</i>	5,381	<i>Atrato</i>	5,140
<i>Trave</i>	5,381	<i>Dresden</i>	4,500
<i>Fulda</i>	5,121	<i>Rome</i>	5,010
<i>Victoria</i>	6,268	<i>Tartar</i>	4,339
<i>Angusta Victoria</i>	7,642	<i>Werra</i>	5,100
<i>Ems</i>	5,192	<i>Orinoco</i>	4,478

The property under the jurisdiction of the *Southampton Harb. Board* is :—Quay space 101,000 super. ft. There are the following

	Area.	Depth.	W. of E.
Open dock	16 acres	18ft LWST.	150ft
" "	" "	31ft HWST.	
Close "	10 acres	28ft " "	56ft
" "	" "	28ft NT.	

Dry docks, &c. :— 26 acres.

	Length.	Width.	Water over blocks.
	ft	ft.	ft.
No. 1	400	66	21
" 2	250	51	15
" 3	500	80	25
" 4	450	56	25
Northam Iron Works Patent Slip	620	20	16 to 18 ST.* 6 to 8 NT.*
J. Ramson's Slip takes vessels of 200 tons	400	24	6

* Height of Tides.

Every accommodation—warehouses, cranes, &c. Total length of present quay exceeds 7,500ft, in addition to the extension quay 1,820 ft long, with 20ft of water at LT., which forms the E. arm of the new Dock of 18 acres, having a depth of 26ft, in course of construction. Shears to lift 100 tons. Cranes to 20 tons. LV. using the *Town Quay* the *Morglay*, 1,525 tons, 21ft dft. Larger vessels go to the docks. Vessels using the *Town Quay* of 13½ft dft. can berth at LW. Some steamers do not go into the docks but land their passengers, mails, and specie there by tender. The larger portion of the trade at the Quay of the Commissioners is carried on by vessels not exceeding 1,000 tons. The traffic at the Royal Pier is mainly Isle of Wight passenger traffic.

Charges.—Harb. dues 1d ton. Boomage 1/6 to 5/, according to size. Wharfage. The rates at this port have been recently revised, and copy of dues and charges can be had on application to Mr. W. Bowyer, Southampton Harb. Board, Southampton.

Pilotage.—District. From a line drawn from Lepe Buoy to Lee Point, to all ports and places within the Southampton Water, and from all ports and places within the Southampton Water to sea. Rates per foot. From any place within a line drawn from Lepe Buoy to Lee Point to Southampton, Hamble, or Bursledon :—17ft dft. and under, 1/6, above 17ft and not ex. 20ft, 2/6, above 20ft, 3/6 ; from any place within a line drawn from Lepe Buoy to Lee Point to Eling, Redbridge, Northam, or Chapel, 1/ per foot more than the above rates. If a vessel, inward-bound, be not boarded until she is ENE. of Calshot Castle, the pilot is entitled to one-third

only of the rate. From Southampton to sea:—17ft dft. and under, 6/, above 17ft and not ex. 20ft, 7/, above 20ft, 9/ per foot. For removing vessels from one place to another within the Southampton Water, the following rates, viz.:—From Southampton to Redbridge, Eling, Northam, or Chapel, and *vice versa*, 1/; from Southampton to Hamble, Bursledon, Leap, or Buckler's Hard, or Beaulieu, and *vice versa*, 1/6 per foot; and for any intermediate distance a proportionate part of the above rates. If a master choose to retain or employ a pilot while at anchor, the charge for the lay days is 7/6 per day.

Towage.—



Tonnage.

Docks.

All vessels light or in ballast, 5/ less than the above charges.

RULES.—The Rates are charged on the British Register tonnage, and include the use of one tug boat for towing vessels. A further charge is made for an extra tug boat. Steamers and yachts towed by agreement. Vessels in the foreign trade 1d. per Customs' Register ton more than coasting vessels. Over 300 tons, ½d. If the tonnage is higher than specified in the tables, towage charged on the next higher rate.

Registered Tonnage.	Dor To the Hallast Wharves and Mouth of Creek.
75	24/
100	25
125	26
150	27
175	28/
200	29
225	30/
250	31/
275	32
300	34/

All vessels to pay this tariff in full.

Registered Tonnage.	Hamble.		Bursledon.	Eling or Redbridge.		
	To the Ballast Wharves and Mouth of Creek.	To the Ballast Wharves.	To the Ballast Wharves and Mouth of Creek.	From Northam to	From Chapel to	From Docks to
75	38/	33/	44	22/	44/	
100	40/	35/	46	24/	46/	
125	42/	37/	48/	26/	48/	
150	44/	39/	50	28	50/	
175	52/	44/	58	32	58	
200	59/	51	66/	37/	66	
225	66/	57/	74/	42	72/	
250	73/	63/	82	46	78/	
275	81/	69/	90	51	84	
300	87/	75/	100	56/	90/	

All vessels to pay this tariff in full.

Light or in ballast, 5/ less.

Officials.—*Southampton Dock Company*, Sec. and Supt., P. Hedger; *Harb. Board*, Clerk and Coll., A. H. Skelton; Harb. Master, W. Burbidge; Wharfinger, W. Bowyer; Coll. of H.M. Cust., R. Henderson; Lloyd's Agent, J. E. LeFeuvre; Lloyd's Survs., L. Sinnette and J. B. Stevens.

Hotels.—"South Western," "Radley's," "Dolphin," "Royal," "Star," &c.

SOUTHEND, Essex. River Thames. Pier $1\frac{1}{2}$ miles long. D. 9ft HW.

Official.—Harb. Master, W. Chingnall.

SOUTHSEA.—See Portsmouth.

Hotels.—"Royal Pier," "Castle," &c.

SOUTHWICK.—See Shoreham.

SOUTHWOLD, Suffolk. Lat. $52^{\circ} 20' N$; long. $1^{\circ} 39' E$. Situated at the mouth of the Blythe, 28m NE. of Ipswich. Auth. Commissioners under Acts of Parliament 20 and 30 Geo. II.; 29 and 49 Geo. III.; and an Act of 1830. Ry. Southwold Ry., nearest station Halesworth, GE. A decaying harb., with dilapidated piers. THW. at f. and c. 10h 20m.

Official.—Harb. Master, W. Blowers.

Hotels.—“Centre Cliff,” “Swan,” and “Crown”

SPALDING, Lincolnshire. Situate on the River Welland, 15m SW. from Clayhole in Boston Deep. THW. f. and c. 7h 30m. Auth. The River Welland Outfall Trustees. D. of water at Sp., 7ft to 9ft. Vessels up to 60ft in length can swing. Accn. Two ship carpenters and slipways.

Charges.—River Welland dues, 9d per ton, on the reg. of the vessel. Coals and road materials 6d per ton; cake manure and other merchandise, 1s per ton.

Pilotage.—Clayhole to Fosdyke Bridge, under 8ft, $1/9$ per ft; over 8ft, $2/$ per ft; Fosdyke Bridge to Spalding, $1/$ per ft.

Officials.—Clerks, Bonner & Calthrop, solicitors, Spalding; Harb. Master, Joseph Atkin.

Hotels.—“White Hart,” “Red Lion.”

SPITHEAD.—A roadstead of the English Channel, between Portsmouth and the Isle of Wight, facing Portsmouth Harb. About 10m in length and 4 in breadth, and could hold 1,000 vessels in safety, and is the principal rendezvous of the British navy. THW. at f. and c. 11h 20m.

STAIRHAVEN, Ayrshire, Scotland. Auth. Owner, Earl of Stair. A small harb. dry at LW., with 14ft HWST and 8ft at HWNT. Used by coasters.

STARLEYBURN, N. side of Frith of Forth. A small harb., fallen into disuse except for the occasional shipping of stones by a quarry tenant of the proprietor, the Earl of Morton.

STAXIGOL, Caithness, near Wick. There is a stone pier, dry at LW., at this place.

STIRLING, Stirlingshire, Scotland. Lat. $56^{\circ} 6' N$; long. $3^{\circ} 59' W$., situated at the head of the Frith of Forth. Rys. Cal. and N.B. No harb. auth. THW. f. and c. 3h 52m.

Official.—Harb. Master, W. M. Dickson.

STOCKTON-ON-TEES, Durham. (See also Middlesboro'.) Lat. $54^{\circ} 34' N$; long. $1^{\circ} 16' W$. Pop. 41,015. Auth. Tees Conservancy Commissioners. P. NC. THW. 4h 25m; Sp. rise $11\frac{1}{2}$ ft; N. rise $8\frac{1}{2}$ ft. D. on bar $17\frac{1}{2}$ ft; ST. 18ft; NT. 14ft. Vessels drawing 13 to 15ft have entered at LWST. W. Prev. N. and E. and NE. Ry. N.E. Tr.—A large I. and E. (specially minerals). LV. 3,200 tons.

Charges.—Port charges on ships. Light tolls 1d ton, steam and sail. Anchorage dues $2/6$ every vessel. Mooring dues $\frac{1}{4}$ d ton. River tolls on ships vary from $1\frac{1}{2}$ d to 6d ton. Tolls on goods, minerals, &c.

Pilotage.—See Middlesboro'.

Towage.—To or from sea, light, 6d per ton; loaded 7d per ton.

Officials.—Sec. to Commrs., J. H. Amos; Harb. Master, Capt. W. F. Marshall; Coll. of H.M. Cust., J. R. Owen.

Hotels.—“Vane Arms,” “Black Boy,” &c.

STOCKWITH, Lincolnshire, under Port of Gainsboro'. **D.**
HWS. 13ft; HWN. 7ft.

Charges.—Dock dues, 5/ per vessel.

STOLFORD BEACH.—See Bridgwater.

STONEHAVEN, Kincardineshire. Lat. 56° 58' N; long. 2° 12' W. **THW.** f. and c. 1h 10m. **Auth.**

Harb. Bd. under Act 20th May, 1825, and Prov. Order confirmed by Act 10th Aug. 1882. Harb. nearly dries at LW., with 13ft HWST. and 9ft HWNT., and is used by vessels up to 200 tons. Quayage 350ft.

Charges.—2d per ton inwards or outwards. Cargo 1½d per ton reg. In ballast, ½d per ton. Harbour lights, windbound 1d per ton.

Pilotage.—30 to 50 tons, 5/; 50 to 60 tons, 6/; 60 to 80 tons, 7/; 80 to 100 tons, 9/; 100 to 120 tons, 10/.

Officials.—Harb. Master, A. Laing; Berthing Master, John Duncan.

STORNOWAY, Island of Lewis. Lat. 58° 11' 28" N; long. 6° 22' 10" W. **Pop.** 3,200. **Auth.** Harbour

Commissioners, incorporated by Act 28 and 29 Vic. c. 76. **P.** NC. **THW.** 6h 46m; Sp. rise 13½ft; N. rise 9½ft. **D.** There is no bar. **En.** to harb. 8 fathoms. **W.** prev. SW. **Ry.** H. (D. & S.) **Tr.**—I. Timber, salt, tar, coal, cement, bricks, flour, &c.; E. Herrings, cured cod and ling, fish, eggs, cattle, &c. **LV.** 2,722 reg. ton.; largest dft. 25ft. Vessels of 3,800 tons have anchored in the harb. **Accn.** Stornoway lies in a deep loch or bay on E. coast of Island of Lewis, and has an area of 150 acres of anchorage, sheltered from all winds. General depth of water 18 to 36ft; a bottom of sand and mud. There are about 600yds of quay wall, and a LW. pier. There is also a patent slip, 140ft long, 24ft wide. H. of T., ST. 9ft; NT. 5ft. There are several warehouses. Coal hulks moored in outer harbour.

Charges.—Harb. dues 3d ton; in ballast and not loading cargo 1½d. ton. No dues charged on steamers coaling or windbound.

Pilotage.—District not defined. **Rates** by agreement.

Towage.—As per agreement.

Officials.—Secs., W. and J. Ross; Harb. Master, Thomas Morison; Collector, W. Lees; Supt. of Cust., W. Callender.

Lloyd's Agent.—Stornoway is within 20 miles of the Butt of Lewis, at which point a Lloyd's signal station is about to be erected. Telegraphic communication now extends to Barra Head, and to several points of the W. coast of Lewis.

STRANGFORD, Co. Down, Ireland, six miles from Downpatrick. **Auth.** Owner, Lieut.-Gen. Lord de Ros, under letters patent of 7th Oct., 1514. Harbour is used by vessels of up to 600 tons. **D.** 11ft LWST., and 3 fathoms on Pladdy Bar at LWST.

Charges.—Quayage 2d per ton reg. Plankage 1/ to 2/6. Ballast 1/ per ton. Anchorage 1/ to 5/.

Pilotage.—Per agreement.

Officials.—Harb. Master, G. Swail.

STRANRAER, Wigtown. Lat. 54° 54' 40" N; long. 5° 1' 40" W. **Pop.** 6,342. **Auth.** Town Council, as

Harbour Commissioners, acting under Harbour Act, 1847, and Burgh Harbours Act (Scot.), 1853. **THW.** (Loch Ryan) 1h 12m; Sp. rise 11ft; N. rise 8ft. **D.** on bar or entrance and in channel, 3ft at LW. **W.** most dangerous N. and NW. **Ry.** Cal. (Port Patrick),

and Ayrton and Wigtownshire. Tr.—I. Timber, coal, provisions, manure, &c.; E. Agricultural produce. LV. about 300 tons. Accn. Being a tidal harb. no vessels can enter at LW. Stranraer at the head of a loch has two piers extending into the sea, of which the eastern is 800yds long, with a depth of 9ft at LW. Extensive and secure anchorage in roadstead.

Charges.—Harbour dues, 50 to 100 tons reg., 3½d ton; 100 to 150 tons, 4½d; 150 to 200 tons, 5d; 200 tons and upwards, 6d. Vessels in ballast 1d ton.

Pilotage.—District not defined. **Rates.** Roadstead to harb. and *vice versa*, 5/ per vessel.

Towage.—None.

Officials.—Town Clerk and Clerk to Commrs., W. Black; Coll. of H.M. Cust., R. Caldwell.

STRANTON, Durham. A small port 2 miles SW. from W. Hartlepool.

STROMNESS, Hoy Sound, Pomona, Orkneys. On SW. coast of the island. A safe harb. with a pier, having 10ft at LWST. alongside. **Auth.** Commissioners under the Orkney Piers and Harbours Act, 1872. Used by steamers up to 470 tons. There are two patent slipways. A lifeboat station. **THW.** at f. and c. 9h om.

STRONTIAN, Loch Sunart, Argyllshire. A small harbour visited by coasting vessels.

STROOD, Kent, on the Medway, a suburb of Rochester, which see.

SUNDERLAND, Durham. At the mouth of the river Wear. Lat. 54° 54' N; long. 1° 22' W. **Pop.** 116,548.

Auth. The river Wear Commissioners are Conservators of Port and are the owners of the South docks. The N.E. Ry. Co. own the North dock. Graving docks as below. **THW.** 3h 22m; Sp. rise 14½ft; N. rise 11ft; R. of N. 7½ft. **D.** in channel between the docks and the sea, generally, HWST. 25½ft; NT. 22ft. **Ry.** N.E. **Tr.**—I. Timber, grain, iron ore, &c.; E. Coals and coke, patent fuel,

marine engineering works. Warehouse accommodation. Timber yards. All connected with railway (N.E. Co.). Steam and hydraulic cranes. Steam shears. Extensive wharfage and quayage space.

Port dues on goods.—*South Dock* rates: Tonnage. Through toll on coal and goods carried through docks. Dock watermen, 100 tons 3/ ton; 200 tons 5/6 ton; above 200 tons ½d reg. ton. in addition. These charges include all mooring.—*North Dock*. Tonnage rates from 2d to 6d ton inwards, and ½d, 1d, and 2d ton outwards.

Pilotage.—District. From Souter Point to Ryhope Dene, and the whole port and harb. of Sunderland. **Rates.** For all vessels into or out of Sunderland 1/6 foot. In addition to these pilotage dues, vessels above 350 tons reg. pay ½d ton on the excess of reg. tonnage over and above that number of tons.

Towage. -Inwards.—Sailing vessels from within the ballast buoys to any part of the docks or river below the bridge 1½d; when a second tug is employed, 1d additional; sailing vessels from within the piers either to the docks or river 1d; steam vessels from sea either to docks or river 1d reg. ton. All vessels under 80 reg. tons, either to docks or river 10s each. Outwards.—Sailing vessels from any part of the South Docks to sea, or from the North Dock to sea by the river 1½d (when two tugs are employed, 50 per cent. additional for the whole towage service); sailing vessels from any tier or berth in or below the rack to sea, either by river or through the dock 1½d (should the vessel remain in the dock over the tide, then ¾d per reg. ton; and when towed to sea, the outward rate of 1½d); steam vessels to sea, either from the docks or river or through the docks 1d reg. ton. All vessels under 80 reg. tons, either from the docks or river 10s each.

Harbour Towage, &c. All vessels from any ballast wharf to any tier or berth in or below the rack, up to 240 tons ½d; for each ton above 240 tons ¼d (no less charge than 5/ per vessel); all vessels from any part of the North or South Docks, to, in, or below the rack, up or down ¾d (no less charge than 7/6 per vessel); all vessels from the North Docks to the Commissioners' Graving Docks, or any part of the South Docks each way ¾d; all vessels from any tier or berth in or below the rack to any tier below, up to 240 tons ½d, for each ton above 240 ¼d (no less charge than 5/ per vessel); all vessels from the Commissioners' Graving Docks to any part of the South Docks ½d reg. ton. These rates do not apply beyond the limits of the port.

Officials.—*River Wear Commrs.*, Gen. Man. and Treas., C. H. Dodds; Clerk and Sec., J. G. Morris; Harb. Masters, W. Gaudie and D. Wright; Traffic Man., T. Atkinson; Dock Master, P. Wilson; Deputy Dock Master, H. J. Beadle; *N.E. Ry. Co. North Dock*,

Goods Agent, W. Bryans ; Coll. and Min. Agent, E. Knox ; Dock Master, Capt. T. Legender ; Coll. of H.M. Cust., W. G. McLean.

SUNDERLAND, NORTH.—See North Sunderland.

SUTAN or CHURCH BAY.—An open beach on NE. side of Holyhead Bay.

SUTTON BRIDGE.—See Wisbech.

SUTTON HARBOUR.—See Plymouth.

SUTTON WASH.—A creek under Wisbech.

SWANAGE, Dorsetshire. Lat. $50^{\circ} 58' N$; long. $1^{\circ} 37' W$.

THW. f. and c. 9h. Ry. S.W. Auth. Pier Co.

A stone and timber pier, 439ft long, carried into 7ft at LW. D. at HW. 14ft. A 5-ton crane.

Charges.—Average 6d per ton. Passengers 1d each.

Official.—Pier Master, Thos. Dixon.

Hotel.—“Royal Victoria.”

SWANSEA, Glamorgan. Lat. $51^{\circ} 34' N$; long. $3^{\circ} 57' W$.

Pop. 100,000. Auth. Harbour Trust, under provisions of the Commissioners Clauses Act, 1847, and the Incorporating Act, 17 and 18 Vic. c. 126. P. Optional outwards ; C. inwards. THW. f. and c. at the Mumble 6h 17m ; Equinoctial Sp. rise 31ft ; OSp. rise $27\frac{1}{4}$ ft ; N. rise $20\frac{1}{4}$ ft ; R. of N. $13\frac{1}{4}$ ft. W. prev. SW. ; most dangerous ESE. Rys. G.W., L. & N.W., and M. Tr.—I. Timber, deals, all kinds of ores, copper, silver, iron, &c., grain, pig-iron, American produce, &c. ; E. Coals, patent fuel, coke, culm, tin plates, and general manufactures. LV. s.s. *Duke of Westminster*, 3,726 gross reg. tons, sailing vessel, *New York*, 2,699 net tons. Accn. Docks, &c. :—

Name.	Area.	Depth of Water on Sill OST.	Lock.		Half-tide Basins.		
			Length.	Width.	Area.	Depth of Water on Sill OST.	Width of Entrance.
	acres.	ft.	ft.	ft.	acres	ft. in.	ft.
North Dock.	14	23	160	56	$2\frac{1}{4}$	26 0	60
South do.	13	23	300	60	4	24 6	70
					Tidal Basin.		
Prince of Wales' Dock.	23	32	500	60	$6\frac{1}{2}$	35 0	150
Beaufort do.	1	—	—	—	—	—	—
Total.	51						

Dry and Graving Docks :—

Owner.	Name.	Length.	Breadth.	D. of W. on Blocks.	Entered from
		ft.	ft.	ft.	
Swansea Dry Dks. & Engineering Co., Ltd. }	Albion	480	$42\frac{1}{2}$	15 to 17	{ North Dock
Central Graving Dock & Engineering Co.	Central	350	60	14 to 22	
Harris Bros.	Cambrian	176	60	18	Harbour. River.
Do.	Do.	156	52	17	
Swansea Dry Dks. & Engineering Co., Ltd. }	Globe	400	46	13 to 22	{ S. Dock Basin
J. Lewis.	Jersey	240	46	11 to 21	
W. Meager.	Phoenix	305	38	10 to 17	Do.
G. B. Meager & Co.	Villiers	280	40	7 to 14	Do.

There are 17,130ft of quayage space. Most modern hydraulic

appliances for quick despatch, ample warehouse accn. transit sheds, sidings, &c. Docks connected with railways direct. Cranes to 6 tons, shears to lift 30 tons.

Charges.—Tonnage dues vary from nothing to 9d ton (steamers trading to ports of North America are charged half the published rates). Wharfage rates on goods. Cranage. Low level railway tolls. Repairing vessels and vessels "seeking" free. Discharging ballast. Charges for use of stiffening booms.

Pilotage.—District. Swansea Harb., &c., and so much of the Bristol Channel as is included within the following limits, viz.: "North of the line of the Nash Lights in one," and east of an imaginary line running north and south of a point four miles westward of the Helwick Light Vessel, near Worms Head. Compulsory inwards, optional outwards. **Rates:—**

If under 60 tons.....	£0 6 0	800 tons and under 900 tons..	£2 10 0
60 tons and under 100 tons..	0 9 0	900 " " 1,000 " ..	2 15 0
100 " " 150 " ..	0 12 0	1,000 " " 1,100 " ..	3 0 0
150 " " 200 " ..	0 15 0	1,200 " " 1,300 " ..	3 10 0
200 " " 250 " ..	0 18 0	1,300 " " 1,400 " ..	3 15 0
250 " " 300 " ..	1 1 0	1,400 " " 1,500 " ..	4 0 0
300 " " 400 " ..	1 5 0	1,500 " " 1,600 " ..	4 5 0
400 " " 500 " ..	1 10 0	1,600 " " 1,700 " ..	4 10 0
500 " " 600 " ..	1 15 0	1,700 and upwards.....	4 15 0
600 " " 700 " ..	2 0 0	And 5/ for every 100 tons	
700 " " 800 " ..	2 5 0	above 1,700.	

Pilots will take vessels over 500 tons reg., outward-bound, clear of the Green Grounds, or to the Mumbles Roads; and the above charge includes landing the pilot in all cases. One-half the above rates only to be paid and payable to every pilot navigating or assisting any vessel (not entering Swansea Harb.) within any part of Swansea Bay, or within the limits of the pilotage ground. Vessels of 200 tons and upwards, if boarded beyond the following bearings, shall pay additional pilotage, as under:—

	West of Pwllty Point bearing NNE.	West of Oxwich Point, bearing NNE. South of Sker Buoy, bearing ENE. or WSW.	West of Worm's Head, bearing NNE.
	£ s. d.	£ s. d.	£ s. d.
200 and under 300 Tons ..	0 4 0	0 5 0	0 6 0
300 " 400 " ..	0 5 6	0 7 6	0 10 0
400 " 500 " ..	0 7 6	0 10 0	0 15 0
500 " 600 " ..	0 10 0	0 12 6	1 0 0
600 " 700 " ..	0 12 6	0 15 0	1 5 0
700 tons upwards ..	0 15 0	0 18 6	1 10 0

For vessels under 500 reg. tons to the Mumbles Roads, or clear of the Green Grounds, in addition to the outward pilotage rates, the following additional rates, including landing:—Under 100 tons 4/; 100 and under 200, 5/6; 200 and under 300, 7/6; 300 and under 400, 9/6; 400 and under 500, 11/. For vessels to the eastern or western limits, in addition to the outward rates, the following additional rates, including landing:—300 and under 500 tons £3; 500 and under 700 tons £4; 700 and under 900 tons £5; 900 and upwards £6. For moving vessels within the harb.:—Under 100 tons, 2/6; 100 and under 200 tons, 3/6; 200 and under 400 tons, 5/; 400 and under 500 tons, 7/6; 500 and under 600 tons, 10/; 600 tons and upwards, 12'. This rule does not apply within either dock.

Towage.—In or out of the harb. 2d; in the harb. anywhere below the Midland Ry. bridge 1d; above that bridge 1½d reg. ton.

Officials.—Gen. Supt. and Statutory Harb. Master and Coll. of rates, John Dixon, Assoc. Inst. C.E.; Clerk to Trust., Talfourd Itrick; Assist. Colls., G. Jones and D. R. Morgan; Dep. Harb. Master Capl. Rosser; Dock Master (Prince of Wales' Dock), Capt. W. Cocks; Dock Master (North Dock), Capt. W. Hiscocks (South Dock), Capt. S. Harman; Coll. of H.M. Cust., C. N. Buchanan Lloyd's Agents, Messrs. Richardson; Lloyd's Surv., W. Ashton.

Hotels.—"Mackworth," "Castle," "Cameron," "Bush," &c.

TARBERT, Argyllshire, Loch Fyne. A creek under Port of Greenock. D. HWST. 35ft, HWNT. 33ft.

Charges.—Harb. dues ½d per ton.

TAYPORT (Ferryport-on-Craig), Fife-shire. Lat. 56° 27' N; long. 2° 49' W. Ry. NB. THW. f. and c. 2h 30m. A small harb. belonging to the NB. Ry., 650ft x 236ft, having an entrance 60ft wide; 1,360ft quayage; 21ft HWST., and 7½ft LWST. Cranes lift to 6 tons. Stairs load 60 tons per hour. D. LWST. 6½ft, LWNT. 8ft, HWST. 19ft, and HWNT. 14½ft.

Charges.—Vessels 1½d per ton. Charge on trimming coal 1½d per ton. Dues on imports and exports 6d; minerals 3d; wood 4d per ton.

Official.—Harb. Master, Wm. Culbert.

Hotels.—"Scotsraig" and "Freemason's."

TEIGNMOUTH, Devonshire. At the mouth of the river Teign.

Lat. 50° 32' N; long. 3° 29' 36" W. Pop.

7,120. Auth. Harbour Commissioners. P. NC. THW. f. and c. 6h 0m; Sp. rise 13ft; N. rise 9½ft; outside bar, time of HW. and LW. about 25m earlier, and there may be 6m more rise and fall. W. prev. W.; most dangerous SE. Ry. G.W. Tr.—I. Coal and general goods; E. Pipeclay, copper, iron, zinc, ores, and lead. Accn. The harb. is formed by the river Teign. Wharf and warehouse accn. Hutchings' Patent Slip, to take vessels of 250 tons, is 100ft long, 21ft wide. Two quays accommodating vessels drawing 13ft at NT., and 16ft at ST.

Charges.—Harb. dues 1d per ton. Ballast, loading or discharging, 11d per ton.

Pilotage.—District. From Lyme to Bob's Nose, and *vice versa*.

Rates. Per foot :—

Vessels in and out over Teignmouth Bar.	Colliers and Coasting Vessels.		It to each et. Out.	Vessels from or to Foreign Ports.		But not to ex. for each Vessel.
	In.	Out.		In.	Out.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Not exceed. reg. tons.	1 0	0 6	2 6	1 3	0 8	6 0
Ex. 20 and not ex. 30 tons	1 0	0 6	3 9	1 3	0	8 6
" 30 "	1 2	0 7	5 0	1 5	0	12 0
" 40 "	1 4	0 8	6 6	1 7	0	16 0
" 50 "	1 6	0 9	8 0	1 10	0 1	0 10 0
" 60 "	1 9	0 11		2 1	1	
" 80 "	2 2	1 1		2 6	1	
" 100 "	2 7			2 11	1	
" 125 "	3 0		by the	3 4	1	All by the
" 150 "	3 5		dft.,	3 9	1 11	foot dft.,
" 175 "	3 10		pt as	4 2	2 1	except as
" 200 "	4 2		ove	4 6	2 3	above
" 225 "	4 6	½	£, for	4 10	2 5	stated, for
" 250 "	4 10		s not	5 4	2 8	vessels not
" 300 "	5 4		tons	5 10	2 11	ex. 60 tons
" 350 "	5 10		ig.	6 4	3 2	reg.
" 400 "	6 3			6 9	3 5	
" 450 "	6 7	¼		7 1	3 7	

A pilot taken on board off the Bill of Portland, or the Start (which is optional to the master), is to receive beyond the pilotage from Bob's Nose to Lyme, as follows, viz. :—For colliers and coasters £2 2s ; for ships from foreign parts, £3 3s ; and proportionately for intermediate distances. Pilots, if required, are to provide a boat and crew to assist over the bar, to a mooring berth, or to sea, for which they shall be paid over and above the pilotage, 2/6 for each man or oar employed, and 2/6 for the boat.

Towage.—In, 3d ; out, 2d ton.

Officials.—Clerk to Comrs., J. H. Tozer ; Harb. Master and Recr. of Harb. dues, T. W. Hutchings ; Coll. of H.M. Cust., A. Tucker.

Hotels.—"Royal," "Queen's," and "London."

TENBY, Pembrokeshire. Lat. 51° 42' N ; long. 4° 43' W. Carmarthen Bay. Ry. Pembroke and Tenby. Auth. Corporation. Accn. Area of harb. 5 acres ; dry at LW., and 16ft HWST. Quay 360ft long. D. at pier head 25ft HWST. W. prev. SE. THW. f. and c. 5h 42m. A lifeboat station.

Hotel.—"Royal White Lion."

THAMES RIVER (see London). Auth. River Thames Conservancy, by Acts, 1857 to 1883. D. off Leigh Shoal, near Southend, where authority commences, is 23ft LWST. All vessels entering the river are returned in the Annual Statement, made by the Board of Trade of vessels entering the Port of London.

THORNHAM, Norfolk, in Brancaster Bay. A creek under Port of Lynn. D. HWST. 8ft, HWNT. 4ft.

Charges.—Harb dues 2d per ton. Ballast free.

Pilotage.—10/ to 12/6 per vessel.

THROSK. A creek under the Port of Alloa.

Charges.—One-sixth of those of Stirling.

THURSO, Caithness. On the N. coast of Dunnet Bay, at the mouth of the River Thurso. No harb. authority. Accommodation for boats engaged in the salmon and cod fisheries.

TILBURY (see London). On the River Thames, opposite Gravesend. Vessels enter at all times of tide.

Accn.—

Name.	Dimensions	Area.	Quayage.
Main Dock	1,816ft × 600ft	25 acres	2,684ft.
Central Branch Dock	1,600ft × 300ft	11 "	3,500ft.
East Branch Dock	1,600ft × 250ft	9 "	3,400ft.
West Branch Dock	1,600ft × 250ft	9 "	3,400ft.
		HWST.	HWNT.
Long Lock to do. in 2 chambers	555ft	41ft	39ft.
" 2 "	145ft	42ft	40ft.

700ft × 80ft wide.

There are about 50 cranes (30 cwt. hydraulic), a floating leviathan (50 tons) two dry docks, a transshipment quay, and coaling jetty.

TOBERMORY, Mull Island, Hebrides. Lat. 56° 37' N ; long. 6° 5' W. THW. f. and c. 6h om. Auth.

Owner, F. W. Caldwell, under Act 25 and 26 Vic., c. 51. Accn. A stone pier carried out to 10ft LW., and 24ft HW. Used by steamers and coasters.

Charges.—Regulated by Act of Parliament.

Hotel.—"Western Isles."

TOPSHAM, Devonshire. Lat. 50° 40' N ; long. 3° 27' W. Ry. L. and SW. Auth. Commrs., under Act 3

Vic. c. 74. There is a dry dock but no harb., merely a quay on the bank of the navigable channel of the Esk; 8 miles from its mouth. Used by coasters up to 100 tons. Only vessels drawing less than 10ft can get alongside at HW.

TORQUAY, Devonshire. Lat. $50^{\circ} 27' 30''$ N; long. $3^{\circ} 31'$ W. Ry. G.W. THW. f. and c. 6h om. Auth. Local Board of Health: a Bill has just passed for the extension of this harb. Accn. The outer harb. has from 10 to 13ft at LWST.; and 20 to 23ft at HWST. Quayage round inner harb. 730ft, with 10 ton crane. P. NC. Rates as agreed by hobblers.

Charges.—4d per ton reg. with cargo; 2d per ton only on windbound vessels. Quay dues various; ballast 1/ per ton.

Official.—Harb. Master, George Pepperell.

Hotels.—"Queen's," "Royal," "Victoria and Albert," "Imperial," &c. The new harbour works will be commenced shortly.

TORRYBURN, Fifeshire. A creek on the Firth of Forth. 4 miles WSW. of Dunfermline. D. HWST. 10ft, HWNT. 8ft.

TRAMORE, Co. Waterford. Near the entrance to the Suir. "The Metal Man" is a sea mark; the figure of a sailor standing upon a round tower and pointing downwards to the rocks below, where the *Seahorse* transport vessel was wrecked in 1816.

TRALEE, Co. Kerry. Lat. $52^{\circ} 16'$ N; long. $9^{\circ} 43'$ W. Pop. 9,600. Auth. Harbour Commissioners. P. C. THW. 4h 3m; Sp. rise $12\frac{1}{2}$ ft; N. rise $9\frac{1}{2}$ ft. D. on bar, ST. $11\frac{1}{2}$ ft. NT. $9\frac{1}{2}$ ft; in basin ST. 14ft, NT. 10ft. Ry. G. S. & W. Tr.—I. Coals, timber, iron, salt, grain, oils, cement, and artificial manures; E. Barley, oats, and pitwood. Accn. There is good accommodation for shipping. Tralee is at the head of a bay, the greater part of which dries at LW. It is approached by a ship canal $1\frac{1}{2}$ miles long, with a depth of 10ft at OST. and 6ft at NT. The basin at Tralee has an area of about 60,000ft, with convenience for loading and discharging. There are also a pier and harbour at Fenit sufficient for vessels drawing 23ft. Crane power to 10 tons.

Charges.—Harb. dues 6d per ton. Ballast 1/6 per ton.

Pilotage.—District not defined. Rates 2/ per foot on coasters, and 2/6 on foreigners.

Towage.—From gate to basin, 3/6 per horse.

Officials.—Sec., L. Redmond; Harb. Master, R. McCarthy.

TRESCOW.—See Scilly.

TROON, Ayrshire, on the Firth of Clyde. Lat. $55^{\circ} 33'$ N; long. $4^{\circ} 40'$ W. Pop. 2,600. Auth. His Grace the Duke of Portland, under Statute 48 Geo. III., c. 47. P. NC. THW. 11h 50m; Sp. rise 10ft; N. rise $7\frac{1}{2}$ ft. D. There is no bar. Depth of water at entrance is from $14\frac{1}{2}$ to $15\frac{1}{2}$ ft. LW. W. prev. from SW.; most dangerous NW. Ry. G. & S.W. Tr.—I. Wood, iron and other ores, and limestone; E. Coal and pig iron. LV. 1,697 tons reg., $22\frac{1}{2}$ ft draught. Accn. The harb. is formed by a breakwater running out in a N. direction. The En. to the

harb. is between the end of this breakwater and a pier, and is 330ft wide. The harb. works are as follows:—

	Area. acres.	Depth. ft.
Tidal Basin or Dock...	About 2	21 at LW.
Outer Harb.	„ 19	14½ to 15½ at entrance.
Do.	—	11 to 12 half-way up.
Do.	—	11 to 12 head of Harb.
Inner Harb.	About 18	Dry at LW.

There is a large iron and wood shipbuilding yard with two Graving Docks, as follows:—

	Length. ft.	Breadth. ft. in.	Depth on OHW. ft.
No. 1	300	37 6	12
No. 2	226	24 6	8

Seven 30-ton steam cranes and one 25-ton steam crane, each capable of shipping 150 to 200 tons of coal per hour.

Charges.—Tonnage dues 1d to 3d ton, according to size. Boats assistance 1½d ton. Dues on goods.

Towage.—To and from the Red Buoy, NW. of the harbour, under 250 reg. tons 2d, 250 and under 500 tons 2½d, 500 tons and upwards 3d ton. To the distance of the Lady Isle, either out or in, £1 each way extra. Should any vessel hoist a jack for a pilot at Lady Isle, they will have one put on board, and be towed in if required, for £1 extra. Notice should be given for tug at least two hours before sailing. Captains refusing to sail after the boat has been got ready by their orders will be charged 5/ additional, unless a satisfactory reason is given for not sailing. Vessels must use their own hawsers, or pay for the use of the harbour one, a rate of not less than 5/ and not higher than 10/, according to the size of the vessel.

Officials.—Man. and Harb. Master, A. Wood; Deputy Harb. Master, W. McMillan; Coll., D. Cook; Principal Officer of Cust., John Paige.

Hotels.—"Portland Arms," "Commercial," and "South Beach."

TRURO, Cornwall. Lat. 50° 16' W; long. 5° 4' W. Including Devoran, Pill Point, Restronguet, Ruan, and Tressillian.

Auth. Town Council, under a Prov. Order, 4th April, 1883. A tidal harb. in the channel of the River Truro, having D. 6ft at LW, and 9ft 6in at HW.

ULLAPOOL, Loch Broom, Cromarty. Lat. 57° 55' N; long. 5° 10' W. A small harb. formed by a pier and a breakwater, with 12ft at LW. outside the breakwater.

UNION HALL PIER, Co. Cork. Bantry Bay. A pier belonging to the Grand Jury.

Official.—Harb. Constable, M. McCarthy.

ULVERSTON, Lancashire. Morecambe Bay. Canal belongs to Furness Ry. D. on canal sill 4½ft less than on Liverpool Old Dock sill.

Official.—Harb. Master, J. B. Barnett, Barrow-in-Furness.

UPHILL.—Creek of Pprt of Bristol, in the Bristol Channel. D. HWST. 12ft HWNT. 3ft.

UYA (pronounced Wi-a). Two islands lying off mainland Shetland. Rendezvous for vessels engaged in deep-sea fishing.

VALENTIA, Co. Kerry, Ireland. A harbour belonging to the Grand Jury of Co. Kerry.

VALLEY.—A creek of Holyhead. Stone pier. D. HWST. 15ft, HWNT. 8ft.

Official. J. D. Thomas, Secretary to the Valley Pier Company.

VENTRY, Co. Kerry, Dingle Bay. A pier belonging to the Grand Jury of Co. Kerry.

WAINFLEET, Lincolnshire. Creek of Boston. 5 miles from the sea.

Official.—Supt., J. Perrin.

WALNEY ISLAND, Lancashire, between Morcambe Bay and entrance to Duddon River. (See Barrow.)

WAREHAM, Dorsetshire. Mouth of the Frome, near Poole.

Ry. L. & S.W. A commodious harb. and quay for small vessels engaged in exporting pipe-clay.

Hotel.—"Red Lion."

WARDLESS, Lancashire. Creek of Fleetwood. On the Wyre. D. HWST. 15ft., HWNT. 10ft.

WARKWORTH, Northumberland. Lat 55° 20' N; long. 1° 31' W. Auth. H. Andrews, Esq. P. NC.

THW. at Coquet Roads, 3h; Sp. rise 14½ft; N. rise 11ft; R. of N. 7½ft. D. on bar: the bar, which formerly had only 1ft at LW. and 15½ at ST., has been reduced by dredging; usual depth at ST. 18 to 19ft; at N. 13 to 14ft. W. prev. E. to NE., particularly NE. Ry. N.E. Tr.—I. Deals, battens, timber, props, &c; E. Coals and bricks. LV. 1,350 reg. tons. No vessel can enter at LW. of ST. Accn. The harb. is formed by the lower reach of the river Coquet, the entrance to the harb. being between two breakwater piers 225ft apart at the entrance. The area of the harb. below LW. mark is 18 acres; depth of water is about 10ft at LWST., and 24½ft at HWST. The area to which this depth extends is from the lowest berths on the S. side to the upper berths of the Radcliffe Coal Co. and extends to about 100ft from face of quays. Length of quay space altogether 1,155ft. A line of quays has been formed on the S. side of the river, bringing the river, which at that place was very circuitous and changeable, into a more direct and fixed course. Along these quays are formed the shipping berths of the Broomhill and Radcliffe Collieries, quay rys., harb. master's, staith master's, and coal-trimmer's offices, also warehouses.

Charges.—Harb. dues, 2½d to 3d per reg. ton; for refuge only, 1d per ton. Trimming, 4/ per keel; steamers, 3/ per keel. Ballast discharged, steam crane, 1/ per ton.

Pilotage.—In summer 1/3; in winter 1/6 per foot.

Towage.—In and out 3/6 per keel.

Officials.—Agent to Prop., J. Park; Harb. Master, M. F. Gray; Staith Master, J. Appleby; Lloyd's Agent, T. Leighton.

Hotel.—"The Sun."

WARREWATER or BUDLE CREEK, Northumberland. D. HWST. 14ft., HWNT. 8ft. THW. 2h 40m.

WATCHET, Somerset. Lat. $51^{\circ} 10' N$; long. $3^{\circ} 20' W$. **Ry.** West Somerset. **Auth.** Commissioners. A small harb. used by coasting vessels. Area $9\frac{1}{2}$ acres. Quayage about 800ft. Dry at LW. D. at HWST. 27ft. There is a good privately-owned steam crane used by arrangement. W. prev. N. and N.E. and NW. THW. f. and c. $6^{\circ} 58m$. A lifeboat station.

Charges.— $\frac{1}{2}d$ per ton reg., with tolls on goods as per tariff.

Officials.—Clerk, E. Helland; Harb. Master, J. Watts.

Hotel.—"West Somerset," A. Mossman.

WATERFORD, Waterford. On both banks of the Suir. Lat. $52^{\circ} 7' 25'' N$; long $6^{\circ} 55' 53'' W$. **Pop.** 22,500. **Auth.** Port and Harb. Comrs., acting principally under Act 9 and 10 Vic. c. 292. **P.** NC. **THW.** f. and c. at W. Bridge at 6h 6m; Sp. rise $13\frac{1}{2}ft$; N. rise $10\frac{1}{2}ft$. D. on bar at S.T. 14ft, NT. 17ft. W. prev. SW. **Rys.** W. & T., W. & C. (I.), W. & L., and W.D. & L. **Tr.**—I. Grain, timber, and coal; E. Cattle, grain, and agricultural produce. **LV.** ss. 1,892 tons, deepest dft. $25\frac{1}{2}ft$. **Accn.** A natural harb. formed by the channel of the Suir from the city of Waterford to its confluence with the Barrow, and thence to the sea by the estuary of these two rivers, a distance of 15 miles. Width of entrance 3 miles. The river Suir is navigable for vessels of 20ft dft. up to Waterford, where they lie afloat at the quays. Quayage space, warehouses, cranes, graving bank, &c. Depth of water at the quays 22ft LWOST. Vessels windbound anchor off Passage East.

Charges.—Harb. dues under 100 tons $1\frac{1}{2}d$ ton, over 100 tons 3d ton. Light dues all vessels over 81 tons $\frac{1}{2}d$ ton. Tonnage dues. Water bailiff's fee. Anchorage.

Pilotage.—**District.** On the east, an imaginary straight line drawn from a point on the coast at or near Crossfarnoge Point to a point at sea three leagues southward of same. On the west, an imaginary straight line drawn from a point on the coast at or near Great Newtown Head, to a point at sea one league southward of same. On the south, an imaginary straight line drawn from the seaward extremity of the above eastern boundary line to the seaward extremity of the western boundary line. On the north, an imaginary line drawn from Granagh Castle to Bilberry Rock, about one mile above Waterford Bridge. **Rates.** Inward:—

	To above Credan Head, and not further than Passage.	To Cheek Point and Glasshouse Reach, and no further.	Above Glasshouse Reach and up to Waterford.
PILOTAGE STATION, No. 1. For piloting any vessel from any part of this station.....	$1\frac{1}{2}d$ per ton	$2\frac{1}{2}d$ per ton	$3\frac{1}{2}d$ per ton
PILOTAGE STATION, No. 2. For piloting any vessel from any part of this station.....	$1\frac{1}{2}d$ per ton	2d per ton	3d per ton
MAXIMUM. Provided always, that no vessel, of whatever tonnage, shall be charged altogether more (inward) than	£ s. d. 7 10 0	£ s. d. 9 13 4	£ s. d. 15 0 0

Outward :—

	To Passage.	To any part of Pilotage Station, No. 1.
From Waterford.....	1½d per ton	2½d per ton
From Waterford, if ballasted by Ballast Office..	1½d per ton	2½d per ton
From Cheek Point.....	...	1d per ton
From Passage.....	...	1d per ton
MAXIMUM.		
Provided always, that no vessel, of whatever tonnage, shall be charged altogether more (outwards) than—		
	£ s. d.	£ s. d.
From Waterford.....	4 10 0	7 10 0
From Waterford, if ballasted by Ballast Office..	3 10 0	6 10 0
From Cheek Point.....	...	3 0 0
From Passage.....	...	3 0 0

Towage.—Same as New Ross.

Officials.—Sec. to Harb Commrs., J. Allingham, jun. ; Harb. Master, N. Parle ; Coll. of Rates, E. Power ; Coll. of H.M. Cust., R. Boyd ; Pilot Master, Capt. Kennedy.

Hotels.—At Waterford : The “Imperial,” “Adelphi,” “Commings’s,” and “Globe.” At Passage : “Kavanagh’s” and “Love’s.”

WATERMOUTH, Devonshire, near Ilfracombe. Ry. L. & S.W.

THW. f. and c. 5h 30m—11h 30m. A small harb. frequented by vessels of about 60 tons ; the property of Mrs. H. M. Bassett. D at HWST. 24ft.

Officials.—Agents, T. J. Pitts Tucker & Sons, Barnstaple ; Harb. Master, R. F. Lewis.

WEARMOUTH, Durham, on the Wear. Connected with Sunderland (which see).

WELLS, Norfolk. Lat. 52° 57′ N ; long. 0° 52′ E. 29 miles NW. from Norwich. Ry. G.E. Auth. Commrs., under several Acts of Parliament. Accn. Quay 645ft. LV. 130 tons. W. prev. NE. and NW. THW. f. and c. 6h 20m. A life-boat station.

Charges.—1/ per ton reg. inwards ; 8d outwards.

Official.—Harb. Master, Capt. W. Temple.

Hotel.—The “Crown.”

WEMYSS, Renfrewshire, F. of Forth. Lat. 55° 54′ N ; long. 4° 53′ W. Auth. Owner, R. Erskine Wemyss, Esq. Accn. Quay frontage 600ft. D. HWST. 16ft and HWNT. 10ft. Used by vessels loading coals from the Wemyss Collieries. LV. 545 tons. W. prev. W. THW. f. and c. 1h 57m.

WESTPORT, Mayo, Ireland (see also Innislyre). Lat. 53° 49′ N ; long 9° 30′ W. Pop. 5,000. Auth. Port and Harb. Commissioners, under Act 1853. P. NC. THW. 4h 57m ; S. rise 12½ft ; N. rise 9½ft. W. prev. W. Ry. M.G.W. Tr.—I. Timber, coal, salt, &c. E. Agricultural produce, &c. LV. from 400 to 500 tons. No vessels enter at LW. Accn. A very safe harb. Large ships bound to Westport and having to be discharged always anchor afloat in Innislyre, which is within the harb. of Westport ; here there is safe anchorage in all weathers for ships of very large tonnage ; warehouse, wharf, and crane accommodation. The quay at Westport is 2,500ft in length ; the approach to the quay is never undertaken without pilots. Vessel 14ft draught may approach quay.

Charges.—Harb. dues. Small boats according to size.

reg. ton. Minimum charge 10/. Outside of above limits by special agreement.

Officials.—Sec. to Comrs., J. W. Walsh; Lloyd's Agents, Jasper Walsh & Co.; Engineer, E. K. Ryan, C.E.; Harb. and Ballast Master, Capt. A. Ennis; Coll. of Rates, W. Murphy; Supt. of H.M. Cust., J. Samuel; Pilot Master, Capt. P. Cogley; Traffic Man. (D. W. & W. Ry.), W. L. Payne.

Hotels.—"White's" and "Imperial."

WEYMOUTH, Dorset. Lat. $50^{\circ} 36' 30''$ N; long. $2^{\circ} 26' 40''$ W. Pop. 13,715. Auth. Town Council, under several local Acts. P. NC. THW. at Portland Br. 7h 1m; Sp. rise $6\frac{1}{2}$ ft; N. rise $4\frac{1}{2}$ ft. D. on bar 12ft LWST. W. prev. SW. Rys. G. W. and L & S. W. Tr.—General. LV. 500 tons at HW. and 200 tons at LW. Accn. The river Wey divides the towns of Weymouth and Melcombe Regis, and from its mouth a stone pier runs out ENE. for about 200yds, and is continued 300ft by a concrete pier 2ft above OST. The N. side of the entrance is protected by a stone pier running out E. by S., and from its end a pile pier extends 300ft. Depth of water in harb. 12ft LW. and 17ft HWST. Area of harb. E. of bridge $19\frac{1}{2}$ acres, W. of bridge 27 acres. The Alexandra patent slip is 134ft long, 26ft wide; height of tides 15ft ST., $12\frac{1}{2}$ ft NT. Extensive improvements have been made in the harbour to give increased depth, for an improved service of boats for the Channel Islands by the G.W. Ry., which run daily each way.

Charges.—Harb. dues 3d ton; in and out windbound 3/.

Pilotage.—District. From St. Alban's Head to Lyme, and *vice versa*. Rates per foot:—Inwards or outwards. From a line drawn from Lulworth to the outer part of the Race or Shambles, into Weymouth or Portland Roads or Bay, from Weymouth or Portland Roads or Bay into Weymouth Harb., from sea into Lyme Harb., under 8 ft., 2s., and 3d. for each additional foot. The pilot must, if required, provide a boat with four men to attend her from the Roads to the quay, or *vice versa*, to tow her in or out, or carry ropes on shore, or to the posts, &c., as may be necessary, for which each man is to be paid 4/ per tide; the owner of the boat to be paid the same as a man. A pilot taken on board at sea shall be entitled to the following additional pay:—From St. Alban's Head or Bill of Portland, to off Bridport or Lyme £2 2s.; if three leagues from the limits of Weymouth, Bridport, or Lyme £3 3s.; if six leagues from the limits of Weymouth, Bridport, or Lyme £4 4s.; if ten leagues from the limits of Weymouth, Bridport, or Lyme £6 6s. Steam vessels calling at Portland for coal only to pay for pilotage into and out of Roads 1/6 per foot for vessel—dry of water.

Towage.—As per agreement with Messrs. Cosens & Co., Weymouth.

Officials.—Town Clerk, P. Hooper; Harb. Master, Robt. A. Ayles; Wharvinger, Henry Warren; Coll. of H.M. Cust., R. A. Crumbleholme.

Hotels.—"Marine," "Victoria," "Queen's," "Golden Lion," &c.

WHIDDY HARB., Bantry Bay, Ireland. Secure and well sheltered for large ships.

WHITBY, Yorkshire. On the Esk. Lat. $54^{\circ} 29'$ N; long. $0^{\circ} 36'$ W. Pop. 14,086. Auth. Harbour Trustees, under Act 1879 and an order of 1883. P. NC. THW. f. and c.

3h 45m ; Sp. rise 15ft ; N. rise 11½ft ; R. of N. 8ft. **D.** Bar dry at LW. **W.** prev. NE. ; most dangerous N. to NW. **Ry.** N.E. **Tr.**—I. Timber, &c. ; E. Coal, alum, jet, &c. **LV.** *New Brunswick*, 574 reg. ton. **Accn.** The harb. is formed by two piers, E. 980ft long, and W. 1,050ft long, and has an area of 89 acres, with a depth at HWOST. varying from 10ft to 15ft, which is influenced by wind. Two 5 ton cranes ; private cranes of from 2 to 5 tons. Quayage space about 3,000ft. There are five Dry Docks, viz :—

Name.	Owner.	Length.	Width Gates.	
		ft.	ft.	in.
	Whitby & Robin Hood's Bay Dock Co.	106	31	6
	Do. Do. Do.	110	33	6
	Do. Do. Do.	113	33	6
Whitehall ...	Turnbull & Son	200	36	3
Boghall	Do.	130	31	10
Average Depth of Water on Sill ST. 9½ft.				

Charges.—Harb. dues, under 50 tons 2d ton, over 50 tons 2½d ton. Refuge, 1d per ton. Rates on goods.

Pilotage.—District undefined. Rates per foot. Whitby, from April 1 to Oct. 1, 1/3 ; from Oct. 1 to April 1, 1/6. Seaham, ditto ; Blyth, ditto ; Amble, ditto ; Alnmouth, ditto ; North Sunderland, ditto ; Holy Island, ditto.

Towage.—Vessels of 9 keels 14/, and 1/ for each additional keel.

Officials.—Sec. to Harb. Trust., P. G. Coble ; Harb. Master, Capt. R. Gibson ; Supt. of H.M. Cust., S. Scott.

Hotels.—"Royal," "Crown," "Angel," and "Station."

WHITEHALL, Stronsa, Orkneys. **Auth.** Col. D. Balfour, under Act 1879. **Accn.** A stone pier 464ft long, carried out to 10ft LW. and 23ft HWST. Vessels of 7ft draught come alongside at all times of tide, and vessels of 13ft 6in at HW. **W.** prev. and most dangerous NW. and NE.

WHITEHAVEN, Cumberland. Seaport, halfway between the Mersey and the Clyde. Lat. 54° 39' N ; long. 3° 35' W. **Pop.** 19,300. **Auth.** Harbour Trust., under Principality Act 22 Vic. c. 14. **P.** NC. **THW.** 11h 14m ; Sp. rise 26ft ; N. rise 19ft. **D.** On dock sill ST. 22ft ; NT. 16ft. **W.** prev. SW. ; most dangerous W. and NW. **Rys.** L. & N.W., and W.C. & E. **Tr.**—I. Grain, timber, and general goods ; E. Coal, iron, ore, pig-iron, and steel rails. **LV.** about 2,000 tons burthen. **Accn.** A tidal harb. enclosed by piers, and divided into the Outer, Inner, N. and S. The Queen's Dock is 4½ acres in extent, entrance 50ft wide, depth of water 25ft. Quayage space, 1,692ft. Extensive shed accommodation and every facility for shipping. Patent Slips, steam and hand cranes, &c :—

	Owner.	Length.	Width.	H. of T.		Remarks.
				ST.	NT.	
		ft.	ft.	ft.	ft.	
Patent Slip.	Whitehaven Shipbuilding Co.	200	32	17	12	{ 6½ft. of water at fore end of carriage.
Gridiron....	Harb. Trust	200	21	13	7	

Charges.—Light dues 2d ton. Tonnage rates, in and out, 5 per cent. rebate on published rates on ships using harb. only. Rates on goods.

Pilotage.—District. No licensed pilots. A boat attends all vessels from the harb. authorities. Rates as per agreement. Usual charge from 15/ to £3.

Towage.—1½d ton, within certain limits.

Officials.—Clerk to Harb. Trust., J. Collins; Harb. and Dock Master, T. Mann; Coll. of H.M. Cust. M. Muir; Coll. of Dues, D. Burnyeat; Harb. Engineer, J. S. Brodie.

Hotels.—"Grand," "Globe," "Black Lion," and "Golden Lion."

WHITEHILLS, Banffshire, Scotland. Lat. 57° 40' N; long. 3° 25' W. Situated midway between Banff and Portsoy. A small tidal harb., dry at LW, used by vessels of the Earl of Seafield. W. prev. N. and NE. THW. f. and c. oh 28m.

Official.—Harb. Master, John Watson.

WHITHORN, Wigtonshire. Lat. 54° 40' N; long. 4° 15' W. A small place near Wigton Bay. Lifeboat station.

Official.—Harb. Master, James Duff.

WHITSTABLE, Kent. Lat. 51° 22' N; long. 1° 2' E. Rys. L.C. & D. & S.E. THW. f. and c. 12h om.

Auth. S.E. Ry. under Act 16 and 17 Vic. c. 157. **Accn.** Small tidal harb. with about 613yds. of quayage, dry at LW. D. at HWST. 14½ft and 11½ft at NT. W. prev. SW. to NE. The trade is principally in coal, corn, and timber; extensive oyster grounds. **Accn.** There are four small slipways to take vessels of 250 tons.

Charges.—Tonnage dues on vessels bringing goods other than coal 4½d per ton; coal vessels, 1/4 per ton reg., and 1d meterage; refuge dues 2d per ton per week.

Pilotage.—If required assistance can be obtained from fishermen at say 10/ per voyage.

Officials.—Harb. Master, W. B. London; Lloyd's Agent, Capt. J. R. Daniels

Hotels.—"Bear & Key," W. Brannan; "Duke of Cumberland," C. Gurr.

WICK AND PULTNEY, Caithness. Lat. 58° 27' N; long. 3° 7' W. Pop. 8,000. **Auth.** Harbour Trust. under Act, 1879, and Provisional Order, 1883. P. NC. THW. f. and c. 11h 22m; Sp. rise 10ft; N. rise 7½ft; R. of N. 5ft. D. There is about 2ft of water at LWST. and 10ft LWNT. between the outer portion of the enclosing piers, and the new head of the S. pier is constructed in about 10ft of water at ebb. W. prev. from W. to SW., and are off the land. The bay is exposed from NE. to S., and with strong winds from these directions a heavy surf is raised in the bay. Ry. H. (Sutherland & Caithness). **Tr.**—I. Timber and salt; E. Grain, wool, fish, &c. LV. 232 reg. tons. **Accn.** Wick and Pultney Harb. consists of 2 basins, generally known as the inner and outer harb. They are tidal harb., with a total area of about 11½ acres dry at LW. of ST. There are about 4,000 lin. ft of quay walls. Vessels of 230ft in length and 16ft deep can discharge and load. Vessels drawing 8ft can enter at LW. Recent improvements afford from 8 to 10ft at LW. along both quays. There is limited cranage and warehouse accommodation.

is 380ft long, 80ft wide. D. ST. 25 to 27ft ; NT. 20 to 25ft. Crane 5 tons.

Charges.—Tonnage rates, UK. and foreign ports, from 2d to 9½d ton.

Pilotage.—District. Wisbech to the Eye. **Rates.** Vessels, laden or light, between the Lower Roads at sea and the Cross Keys Bridge, or from or to any intermediate place (barges and lighters belonging to Wisbech excepted) 1/6 ft. Inwards and outwards:—All vessels drawing 12ft. and upwards, whether inwards or outwards 1.9 ft. If the master or commander of any ship or vessel (except ships or vessels delivering at or loading from the Eye) requires a pilot to go or continue on board beyond the Lower Roads or above the Cross Keys Bridge, he shall pay 1/4 per foot.

Towage.—As per agreement.

Officials.—Town Clerk, F. Jackson ; Harb. Master, W. W. Nicholls and G. Hoole ; Coll. of H.M. Cust., W. G. Hamilton.

Hotels.—"Rose and Crown," "White Hart," "Vine," "Ship," "White Lion," &c.

WITHERNSEA, Yorkshire. A fishing port and pleasure resort. Open beach. Iron pier.

WIVENHOE, Essex. River Colne. **Auth.** Colne Commissioners under ancient royal grant. **Ry.** G.E. Vessels of 300 tons get up to this place. There is a patent slipway. Messrs. Forrest & Son, of Limehouse, London, are making a graving dock at this place.

Official.—Coll. of Channel Dues, J. M. Johnstone ; Cust. Officer, H. Russell.

WOODBIDGE, Suffolk. Lat. 51° 59' N ; long. 1° 23' E. On the Deben. **No Harb.** **Auth.** Considerable trade in coal, corn, timber, &c. **Accn.** Convenient wharves and quays.

Official.—Cust. Officer, W. Quick.

WOODHAVEN, Fifeshire. On the Tay, opposite to Dundee. The only remains of a harb. is a stone pier.

WORKINGTON, Cumberland. On the Derwent. Lat. 54° 38' N ; long. 3° 33' W. **Pop.** 23,000. **Auth.** Earl of Lonsdale under Acts, 1850, 1861, and 1869 **P. NC.** **THW.** f. and c. 11h 4m ; Sp. rise 25½ft ; N. rise 20ft. **D.** of water at entrance at LW. 2ft. **W.** prev. SW. ; dangerous NW. **Ry.** L. & N.W. **Tr.**—I. Grain, timber, ore, and general goods ; E. Coal, iron, ore, steel rails, &c. **LV.** 1,032 reg. ton ; length 232ft, dft. 18ft 4½in. **Accn.** The harb., formed by the outlet of the river Derwent, is fronted by a stony foreshore one-third of a mile broad. That to the S. of the entrance projects well out to the W. of the N. shore, and from it a stone pier runs out in a NW. and WNW. direction, from which a breakwater extends NW. 500ft, also on same side are a wooden pier, quay jetty, and main pier containing a space known as the old dry dock ; also another projection called Merchants' Quay, between which and the main pier is the harb. On the N. side is the Lonsdale Dock 600ft long, 300ft wide, area about 4½ acres. Entrance gates 40ft wide, depth over sill ST. 18ft ; NT. 8ft. Ample and convenient stowing ground for rails, pig-iron, iron ore, &c. Large and convenient shed for dry goods. Steam cranes. The Derwent Patent Slip, which take vessels 150ft long and of 350 tons, is 150ft long, 30ft wide. Eight cranes.

Pilotage.—District. From Yarmouth to and from the Dudgeon Light Vessel, and from Yarmouth to and from Orfordness; thence across the Kentish Knock to and from the Downs.
Rates :—

	For Vessels not ex. 11 ft dft.	For Vessels ex. 11ft, and not ex. 14ft.	For Vessels ex. 14ft.
	£ s. d.	£ s. d.	£ s. d.
*From the Dudgeon Light, its parallel of latitude, or the northward thereof, to Orfordness	5 0 0	6 5 0	7 10 0
*From Smith's Knowl, Yarmouth, or Lowestoft to Orfordness	1 5 0	2 10 0	3 15 0
*From Southwold to Orfordness....	0 17 6	1 5 0	1 17 6
From the Dudgeon Light, its parallel of latitude, or the northward thereof, to Yarmouth Roads, either within or without the Sands	2 10 0	3 12 0	6 0 0
From the Dudgeon Light, its parallel of latitude, or the northward thereof, to Downs	10 10 0	12 0 0	15 15 0
From Smith's Knowl, Yarmouth, or Lowestoft, to Downs	8 8 0	10 0 0	12 12 0
From Smith's Knowl, Yarmouth, or Lowestoft, to the entrance of the Gatways	1 0 0	1 10 0	2 2 0
From Orfordness to the entrance of the Gatways	1 0 0	1 10 0	2 2 0
From Sea to Yarmouth Roads, through any of the Channels	4 ¹ per foot draught.		
From Yarmouth Roads, through any of the Channels, to Sea	2 ⁶ per foot draught.		

* An addition of one-fifth is chargeable on the above rates, in case the pilot shall conduct the vessel to any port or place westward of the Nore Light.

No vessel to pay for less than 11ft. Into and out of the harb. of Yarmouth, per foot :—Vessels 8ft dft. and under, 1/6 ; above 8ft and under 9ft. 1/9 ; 9ft and under 10ft, 2/ ; 10ft and under 11ft, 2/3 ; 11ft and under 12ft, 2/6 ; 12ft and under 13ft, 2/9 ; 13ft and under 14ft, 3/ ; 14ft and under 15ft, 3/6 ; 15ft and under 16ft, 4/. An additional 2½ per cent. is charged upon the above rates. Vessels piloted into the harb. (100 to 250 tons) pay 5/ ; exceeding 250 tons, 1/ for every 50 tons or any portion, for use of boats. Fishing vessels pay 5/ each into harb.

Towage.—To or from Sea—

	Loaded.	In ballast.		Loaded.	In ballast.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
Under 50 tons ..	0 13 6	0 12 0	120 and under 130	1 9 6	1 1 6
50 and under 60	0 15 0	0 13 6	130 " 140	1 13 6	1 5 6
60 " 70	0 16 0	0 14 0	140 " 150	1 17 0	1 8 0
70 " 80	0 19 0	0 15 0	150 " 160	1 19 0	1 10 0
80 " 90	1 1 0	0 16 0	160 " 170	2 1 0	1 12 0
90 " 100	1 3 6	0 17 0	170 " 180	2 3 0	1 13 0
100 " 110	1 6 0	0 19 0	180 " 190	2 4 0	1 15 0
110 " 120	1 8 0	1 0 0	190 " 200	2 5 6	1 16 0

And at proportionate rates up to 400 tons. Over 400 tons to be agreed for.

Officials.—Clerk to Port Commissioners, J. Tolver Waters ; Collector of Haven Rates and Dues, H. D. Sayers ; Harbour Master, T. Press ; Collector of H.M. Customs, Alexander Macfarlane.

YEALM RIVER, Devonshire. Lat. $50^{\circ} 17' N$; long. $4^{\circ} 5' N$.
7m SE. of Plymouth. A small harb. D. at
LW. at entrance 9ft, at HW. 16ft. A lifeboat station. THW
f. and c. 5h 38m.

Charges.—None

Official.—T. Watton, Chief Officer of Coastguard.

YOUGHAL, co. Cork, Ireland. Lat. $51^{\circ} 56' N$; long. $7^{\circ} 50'$,
W. Ry. Gt. CS. & W. THW. f. and c. 5h 14m.
Auth. Commissioners under Harb. Order, 1878. D. of water on
bar LWST. 4 to 5ft, and at HWST. 21ft. LV. 900 tons drawing
20ft. W. prev. W. and SW., most dangerous S. or SE.

Charges.—1d per ton, windbound $\frac{1}{2}$ d per ton.

Pilotage.—As may be agreed.

Officials.—Sec. J. J. O'Shea; Harb. Master, Danl. Kavanagh.

Hotels.—"Green Park," "Devonshire Arms," and "Imperial."

II.—FOREIGN PORTS.

AALBORG, Denmark. Lat. $57^{\circ} 03' N$. ; long. $9^{\circ} 57' E$. Pop. 12,000. **Tr.**—I. Coal, salt, lumber, &c. ; E. Cattle, grain, wool, hides, fish, &c. **Accn.** The harbour, though safe, is too shallow to allow vessels drawing more than 11ft to enter. Vessels of greater dft. than that have to lighten at Hals, a small town near the mouth of the Lym fiord. **Charges.** Expenses of a vessel of 175 tons, with cargo out, about £10.

AARHUUS, Denmark. Lat. $56^{\circ} 9' N$. ; long. $10^{\circ} 14' E$. **Tr.**—I. Coal, iron, wood, and phosphate ; E. Grain, flour, butter, cattle, pork, beef. **Accn.** 18ft in the harb. Cranes to lift from 5 to 10 tons. **Charges.** Tonnage dues 6d. ton. Harb. dues $1\frac{1}{4}d$. Ballast as per agreement. **Pilotage.** $\frac{3}{4}d$ per reg. ton. If no pilot required, only half pilotage charged. Depth at high water 21ft ; low 19.

ABO, Finland. Lat. $60^{\circ} 25' N$. ; long. $22^{\circ} 17' 15'' E$. Pop. About 25,000. **Tr.**—I. Salt, salt fish, pig-iron, manufactured iron, coals, coke, cotton, machinery, sugar, and general colonial produce, soap, timber, bar iron, beef, oats, rye, pork, butter, and game. **Accn.** There are three patent slips, one of which can take a vessel of 175 to 200ft in length. Vessels drawing more than 10ft or 12ft cannot get up to the town. Cranes to lift 30 to 45 tons. **Charges.** Custom dues for a vessel of 400 tons about £8, clearing in or out. Harb. fees 2d ton. **Pilotage.** Rates depend on dft. of vessel. Vessel of 15ft dft. from Uto about £3 2s. **Towage.** From £10 to £12.

ACAJULTA, the port of Sonsonate (San Salvador), 62 m. E. of San José. **Accn.** Ships anchor in 9 to 11 fms. Vessels load and discharge cargos in bongos or whaleboats. **Charges** on vessel of 300 tons loading part at A. and part at Libertad, about £16. One customs charge of 12 c. per ton clears A., Libertad, and La Union, the three ports of San Salvador.

ACAPULCO, Mexico. Lat. $16^{\circ} 50' 29'' N$. ; long. $99^{\circ} 46' W$. Pop. 5,100. **Tr.**—I. Cottons, silks, spices, hardwares, and liquors ; E. Cochineal, cocoa, wool, indigo, skins, and cotton. **Accn.** Acapulco is one of the best Harbs. belonging to Mexico in the Pacific. Vessels of any size discharge alongside wharf ; harb. affords shelter and land-locked anchorage of 16 fms and under in a surface of one mile square. **Charges.** It is a free port, and vessels are not liable for tonnage or entrance dues. **Pilotage.** $14/7$ foot dft. inward and outward.

ACHEAN, Island of Sumatra. Lat. $5^{\circ} 35' N$; long. $95^{\circ} 45' E$.

Pop. A. and district 500,000, mostly natives and Chinamen.

Tr.—E. Gold, pepper, betel-root, camphor. **Accn.** Anchorage outside safe in 7 to 9 fms. Only 9ft water on bar at high water. Foreign vessels not allowed to trade at Achean.

ACRE, Turkey. Lat. $32^{\circ} 54' 35'' N$; long. $36^{\circ} 6' 20'' E$. **Pop.**

8,000. **Tr.**—E. Wool, cotton, wheat, millet, olive oil, cotton seed, sesame seed. **Accn.** Harb. has 12ft of water.

Charges. On a brig 214 tons £14 3s 3d. **Pilotage.** An interpreter, who acts also as pilot and stevedore, is paid according to agreement, say from £3 10s to £5 for the time the vessel remains.

ADALIA, Turkey. Lat. $36^{\circ} 52' 15'' N$; long. $30^{\circ} 45' 3'' E$.

Pop. 17,500. **Tr.**—I. Manufactures generally, brought to A. by English steamers from Smyrna, Syra, &c. E. Wheat, timber, firewood. **Accn.** Summer anchorage in 15 to 20 fms water. Port only entered by small vessels.

ADEN, Arabia. Lat. $12^{\circ} 47' N$; long. $44^{\circ} 57' 34'' E$. **Pop.**

About 60,000. **Tr.**—I. Coal, cotton, cotton and silk piece goods, grain, live stock, metals, provisions, seeds, tobacco, ammunition, wine, beer, spirits; E. Coffee, dyes, ostrich feathers, gum, ivory, hides, pearls. **Accn.** An outer harb. offering good anchorage to a large number of vessels, and inner harb. taking about 24 vessels of 1,000 tons each; $17\frac{1}{2}$ to 24ft in the inner harb. The depth in outer harb. is from 19 to 28ft. Vessels drawing from 18 to 26ft can anchor in outer harb. **Charges.** Port dues $1\frac{1}{2}$ d per reg. ton. Vessels calling only for coals pay half dues, those calling only for orders, letters, &c., are exempt. **Pilotage.** Every vessel of over 100 tons burthen $1\frac{1}{2}$ d reg. ton. **Towage.** For the distance usually towed (9 miles) 7d ton.

AGUILAS, Spain. Lat. $37^{\circ} 23' N$; long. $1^{\circ} 37' W$. **Tr.**—E.

Esparto and iron ore. **Accn.** Vessels moor to the breakwater in 10 fms, well protected. Cargo is shipped in lighters from moles across the bay. **Charges.** On steamer loading 400 tons of esparto, including all charges, about £50. **Pilotage.** On a steamer from Genoa in ballast to load 300 tons of esparto grass at Aguilas, pilotage (daylight, at night double) £1 1s $10\frac{1}{2}$ d.

AJACCIO BAY, Corsica. Lat. $40^{\circ} 55' 1'' N$; long. $8^{\circ} 44' 4''$

E. **Pop.** About 14,000. **Tr.**—I. Tobacco, coffee, sugar, pepper, salt, &c.; E. Wood, wine, timber, maize, skins, goats, rags, olive oil, cork, &c. **Accn.** 30ft of water in the middle of the harb. **Pilotage.** Vessels of 300 tons or under 1d per ton, above 300 tons $\frac{1}{2}$ d per ton. Depth of water 9ft.

AKYAB, India. Lat. $20^{\circ} 5' 7'' N$; long. $92^{\circ} 54' E$. **Pop.**

About 23,000. **Tr.**—E. Rice, cotton, &c. **Accn.** Vessels of the largest dft. can ascend as far as town. **Charges.** Port dues $4\frac{1}{2}$ d ton. Coast light dues $2\frac{1}{2}$ d ton. Port charges on a vessel of 1,035 tons £380. **Pilotage.** From Oct. 15 to May 15 for 14ft £3 4s, for 20ft £12. From May 15 to Oct. 15 double. Steamers half rates. A pilot is not necessary to take the ship to the ballast ground, but if one is taken the charge is 48/.

ALBANY, Western Australia. Lat. $35^{\circ} 2' 20'' S$; long.

$117^{\circ} 54' E$. **Pop.** 3,000. **Accn.** On the north side Princess Royal Harb. there are 4 and 5 fms of water, deepening to 6 and 8 fms within the Narrows; Sp. rise 1ft to 4ft. The finest harb. in Western Australia, and situated on the north side

of Princess Royal Harb. and King George's Sound. Hand crane to lift 5 tons. **Charges.** Tonnage dues inward and outward 6d reg. ton. If discharging or loading less than quarter reg. tonnage 3d ton on cargo. Light dues 2d reg. ton., inwards and outwards. **Pilotage.** Into King George's Sound from the sea and *vice versa*, 10ft and under £2; 10 to 11ft, £2 4s; 11 to 12ft, £2 8s; 12 to 13ft, £2 15s, and 5/- extra per ft to 21; 21ft and upwards, £5. Into Princess Royal Harb., including navigation of the Sound, and *vice versa*, under 8ft £2; 8 to 9ft £2 5s, and 5/- extra per ft to 19; 19 to 20ft £5 12s; 20 to 21ft £5 18s; 21ft and upwards £6 6s.

ALEXANDRETTA, Syria. Lat. 36° 35' 40" N; long. 36° 9' 5" E. Pop. 5,000. Tr.—I. Corn, rice, salt, and European goods; E. Cotton, galls, silk. **Charges.** Port charges on a vessel of 292 tons, £2 18s. 6d.

ALEXANDRIA, Egypt. Lat. 31° 12' N; long. 29° 51' E. Pop. about 230,000. Tr.—I. Cotton goods, coal, woollen and silk goods, timber, tobacco and cigars, hardware and haberdashery; E. Corn, cotton, wool, gum, soda, rice, dates, senna, feathers, hides, cotton seed, manufactured goods, rags, onions, lentils, and cigarettes. **Accn.** An excellent harb. with an area of 700 acres. The Boghaz or central pass is deep enough for vessels of 24½ft dft. A floating dock capable of taking a vessel of 4,000 tons, and a graving dock 285ft in length. **Charges.** Tonnage dues: Cargo, entering or clearing, 1½ piastre tariff (3.69d) per ton; in ballast 30 paras (1.85d) per ton. **Pilotage.** The pilotage is fixed at 32/, a reduction of 1/6 being made in favour of the mail-boats. **Towage.** On a vessel of 338 reg. tons, coals in, drawing 15½ft, cotton seed out 14½ft: towage to berth £2.

ALEXANDRIA, U.S. Lat. 38° 49' N; long. 77° 18' W. Pop. about 16,000. **Accn.** Vessels of 20ft dft. can safely go into port. There is 16ft of water alongside wharves. The trade is almost exclusively confined to coasters.

ALGHERO, Italy. Lat. 40° 32' 47" N; long. 8° 15' 49" E. Pop. 9,000. Good anchorage in summer in 8 to 10 fms, about a mile from town. 4 fms about 5 cable-lengths off. Exposed to winds from S. and S.W. Tr.—E. Wine, butter, cheese, wool, skins, tobacco, rags, anchovies, coral, and bones.

ALGIERS, Africa. Lat. 36° 47' 20" N; long. 3° 4' 32" E. Pop. 80,000. Tr.—I. Wine, coal, lumber, machinery, breadstuffs, sugar, manufactured goods, &c.; E. Hides olive oil, wool, tobacco, tan-bark, &c. **Accn.** Two graving docks, the only ones in the colony. The first is capable of holding the largest man-of-war in the French navy. The second is intended for smaller vessels. **Charges.** On a vessel of 200 reg. tons in and out £5. **Pilotage.** On a vessel of 199 reg. tons, coals in and ballast out, in and out £1 6s 6d. Rise and fall of tides 2 or 3ft. **Eng. Brokers.** Bergeret, Cherfils, Crispe, Sarrazin.

ALGOA BAY (Port Elizabeth), Africa. Lat. 33° 0' 40" S; long. 27° 53' E. Tr.—I. General; E. Wool, skins, hides, angora hair, cotton, linseed, diamonds, horns, ivory, feathers, aloes. **Accn.** Inner anchorage in 6 fms, outer anchorage for large vessels in 8 fms. Cranes to lift 7 to 10 tons. **Pilotage.** Inwards for vessel of 600 tons, £3 3s. (Pilotage not requisite.) Depth at high water 22ft; low 16ft.

coal, manufactured goods, &c. ; E. Produce of Holland and part of her possessions in the East and West Indies. **Accn.** A spacious and secure harb. ; the largest ships come close up to the quays and warehouses. Ent. to harb by North Sea Canal from Ymuiden, the depth of canal and of larger docks being 24ft. Ample repairing facilities, there being 4 floating dry docks for vessels of 13ft dft, 1 for vessels of 17ft dft, and 2 for vessels of 18ft dft. Cranes to lift 80 tons. **Charges.** On a sailing ship of 1,000 reg. tons, loaded inward and ballast outward, £105 in summer, £116 in winter ; steamer of 1,000 reg. tons do., £60 in summer, £66 in winter. **Pilotage.** On sailing vessel of 1,000 tons net reg. Inward, loaded, from Dungeness or North Sea 19ft, summer £7 12s, ditto winter (October to March) £9 16s 3d. Outwards from Amsterdam to sea, 14ft, summer in ballast £1 15s 7d, winter loaded £2 1s, ditto 19ft in ballast, summer £5 10s 8d, winter loaded £6 1s 6d. **Towage.** On sailing vessel of 1,000 tons net reg. :—Inwards, loaded, sea to Ymuiden £5 7s 8d ; ditto pierhead to Ymuiden £3 1s 9d ; ditto Ymuiden to Amsterdam £6 8s. Outwards :—Amsterdam to Ymuiden in ballast £5 2s 3d, loaded £6 8s ; Ymuiden to sea ditto £3 1s 9d, ditto £3 1s 9d ; Ymuiden to pierhead ditto £2 9s 10d, ditto £2 9s 10d.

ANCONA, Italy. Lat. 43° 37' 42" N ; long. 13° 30' 35" E. **Pop.** About 46,000. **Tr.**—I. Coal, iron, sugar, petroleum, fish, and grain ; E. Cereals, hides, fruit, and sulphur. **Accn.** A harb sufficiently capacious to receive vessels of large tonnage, drawing 24ft of water. Vessels drawing 17 to 19ft of water may discharge alongside quay or projecting mole. **Charges.** Disbursements of a vessel of 213 tons, about £26. **Pilotage.** 70 francs for any vessel of 600 tons and upwards. Not compulsory.

ANGOSTURA, Venezuela. Lat. 8° 8' 10" N ; long. 63° 55' 20" W. **Pop.** 10,000. **Tr.**—E. Cotton, tobacco ; I. Manufactured goods. **Accn.** Vessels of 10ft dft. can reach the town at all times ; vessels of 16ft dft. at ST. *Sailing* impracticable during rainy season. Vessels can come alongside quays when the river is high. **Charges.** Port charges about £3. No tonnage, pilot, and light dues.

ANNAPOLIS, Maryland, U.S. Lat. 38° 59' N ; long. 76° 29' W. **Tr.**—Almost wholly confined to Chesapeake Bay. **Accn.** Vessels drawing 20ft of water can anchor in the river, and those of 12ft dft. can lie alongside the wharves. Annapolis is 28 miles SSE. of Baltimore. No port charges. **Towage.** See Baltimore.

ANTOFAGASTA, Chili. Lat. 23° 41' S ; long. 70° 25' W. **Pop.** About 6,000. **Tr.**—E. Nitrate of silver and ores. **Accn.** The best anchorage is in about 12 fms of water. The bottom is very uneven and rocky ; the shackles of mooring anchors should therefore be well fastened by wooden keys or pins, so as to prevent unshackling by the constant knocking on the bottom. Many vessels have lost their anchors at this port owing to the unshackling of the chain. **Charges.** Port dues are light. **Pilotage.** Pilotage is not compulsory, but vessels arriving with cargo generally engage a pilot. For rates see Valparaiso. **Towage.** For ships loaded giving them offing : 150 to 1,000 tons reg. £1 10s to £5, over 1,000 tons reg. conventional ; ships in ballast 150 to

1,000 tons reg. £1 to £4 10s, over 1,000 tons conventional ; taking ships from moorings to single anchorage 150 to 1,500 tons 12/ to £2 10s, over 1,000 tons conventional ; towage in to moorings from 12/ to £3 10s according to tonnage.

ANTWERP, Belgium. Lat. 51° 13' N ; long. 4° 24' E. Pop. 208,000. THW. 4h 25m ; sp. rise 15ft. Tr.—

I. Cotton, sugar, coffee, hides, grain, wool, indigo, dye-woods, spices, guano, tobacco, and petroleum ; E. Coal, railway, bar and other iron, arms of various kinds, glass, flax, grain, marble, and manufactured goods. Accn. Eleven floating docks, four large docks for lighters and small craft. Total water surface of the docks about 70,000 sq ft. Width of actual gates 78 ft. Vessels of 28ft dft. can moor alongside the new quays. In the nine new docks about 21ft ; in the two old docks about 18ft 9in. Graving docks, &c. : Six dry docks belonging to the town, and four private dry docks. Antwerp is the chief port of Belgium. Cranes to discharge 25 tons per hour. **Charges.** Discharging and loading from 3d to 1/ according to cargo. Port charges for steamers of 1,000 tons (Belgian measurement) about £70. **Pilotage.** Minimum 9ft 8in dft. :—

	Summer. April 1 to Sept. 30.			Winter. Oct. 1 to March 31.		
	£	s.	d.	£	s.	d.
From sea to Flushing, sailing.....	1	16	4	2	8	5
From Flushing " towed	1	14	1½	2	5	8
From Flushing to sea, sailing.....	1	4	3	1	6	11
From Flushing " towed	1	2	8	1	5	7½
From Flushing to Antwerp, or <i>vice versa</i> , sailing	2	8	0	2	10	9½
Up to 19ft 8in dft. :— " " towed	1	18	2	2	8	0

Up to 19ft 8in dft. :—

	Summer.			Winter.			For every 4in dft. more.			Summer.			Winter.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
From sea to Flushing, sailing	16	17	8	22	0	2	1	0	4	1	6	11	1	6	11
From Flushing " towed	15	17	6	21	16	9	0	18	9	1	5	3½	0	16	0½
From Flushing to sea, sailing....	12	3	8½	13	0	1	0	16	1	0	16	0½	0	15	1½
From Flushing " towed	11	8	6	12	3	9	0	15	1½	0	15	1½	0	15	1½
From Flushing to Antwerp, or <i>vice versa</i> , sailing	8	15	1½	8	18	6	0	5	7	0	5	7	0	5	7
Ditto, towed	7	16	2	8	7	2	0	4	9	0	4	9	0	4	9

Towage. Varies from £12 for 200 tons to £50 for 2,000 tons.

APENRADE, Germany. Lat. 55° 2' 57" N ; long. 9° 26' 38" E. Tr.—I. Timber and coals. Accn. Vessels drawing 16ft may safely lie alongside quays. No dry dock, but wooden vessels can be repaired. **Charges.** Port charges for ship of 200 tons about £12 10s. **Pilotage** according to agreement. **Tonnage.** Vessels over 85 cub. metres loaded 2½d, ballast 1½d inwards and outwards.

APIA, Upolu Island, Samoan Group. Lat. 13° 49' 44" S. ; long. 171° 44' W. THW. f. and c. 6h 28m. Anchorage for vessels of largest size. Sp. rise 4ft. The harb. in which several American and German war vessels were lost March 15, 1889, and from which H.M. *Calliope* escaped.

ARCHANGEL, Russia. Lat. 64° 33' N ; long. 40° 33' E. Pop. 20,000. THW. 7h 28m ; Sp. rise 2½ft only. Tr.—I. Coal, coffee, tea, spices, lead, oil, sugar, logwood, salt, wine, furs, fish, fruit, and hardware ; E. Oats, rye, linseed, deals, flax, tow, mats, oil, pitch, train oil, and tar. Accn. The

channel has a depth of 14ft, and there are 16ft to 18ft of water on the bar. **Charges.** On a vessel of 289 tons £45 1s 6d. **Pilotage.** 3/7 foot. Pilotage is obligatory, and charged whether a pilot is taken or not. **Towage.** £13 to £16 5s from the port to the sea.

ARENDAL, Norway. Lat. 58° 27' 30" N ; long. 8° 47' 29" E. Pop. 4,500. **Tr.**—E. Timber and sawn wood, also small quantities of copper, iron, and lobsters. **Accn.** The harb. has from 8 to 20 fms of water. Depth about 87ft. **Charges.** On vessel of 291 tons, dft. 16½ft, about £46 10s. **Towage.** Charges moderate.

ARGOSTOLI, Greece. Lat. 38° 11' 36" N ; long. 20° 29' 30" E. Pop. About 6,000. **Accn.** Anchorage in 3 to 12 fms close to the town. The principal port in the island of Cephalonia. **Charges.** Vessels with cargo to discharge or load pay 1d reg. ton ; load and discharge 1½d ; in ballast, exempt within eight days, if over. ½d ton ; light dues 5d ton, all with 15% added. Quay dues 1d on vessels over 10 tons.

AUCKLAND, New Zealand. Lat. 36° 50' 5" S ; long. 174° 49' 10" E. Pop. 21,000. **Tr.**—I. English and American manufactured goods, soft goods, groceries, oilmen's stores, ship chandlery, ironmongery, &c. ; E. Gold, timber in spars and sawn, gum, flax, wool, oil, hides, tallow, rope, &c. **Accn.** There are two extensive wharves. Anchorage in 4 to 8 fms, 4 to 5 cable lengths off the city. The wharves have a depth alongside of from 12ft to 20ft at low water. The range of tide is from 7ft to 11ft. Two graving docks 310ft. and 500ft in length. Crane power 12 tons, steam power 50 tons. **Charges.** Stone ballast taken from the wharf 4/ ton ; sand 3/ ton ; water 4/ ton ; lighterage about 3/ ton ; wharfage ¼d gross reg. ton per day, Sundays excepted. **Pilotage.** For every sailing vessel from places outside of Hauraki Gulf, and not exempted, 3d ton ; for every sailing vessel to places outside of Hauraki Gulf, and not exempted, 3d ton ; for every steam vessel from places outside of Hauraki Gulf, and not exempted, 2d ton ; for every vessel to places outside of Hauraki Gulf, and not exempted, 2d ton. **Towage.** There are no proper steamtugs, the largest of vessels working in and out of harb. with the tide ; but small river steamers occasionally (in calm weather) tow, according to agreement.

AUGUSTA, Sicily. Lat. 37° 13' 35" N ; long. 15° 14' E. Pop. 10,000. **Tr.**—E. Salt, oil, honey, and wine. **Accn.** The harb. is difficult to enter and a pilot should be employed ; once inside it is deep, spacious, and secure. Vessels of 15ft can anchor within 200yds of the landing-place.

AUX CAYES, W. Indies. Lat 18° 6' 0" N ; long. 73° 43' 40" W. Pop. 15,000. **Tr.**—I. Cotton stuffs, provisions, wines, oil ; E. Coffee, logwood, and cocoa. **Accn.** Anchorages in bay safe during fine season, but dangerous in winter. **Charges.** Port charges, disbursements, about £143. **Pilotage.** Vessels of from 50 to 100 tons, £1 os. 10d. ; 101 to 200, £1 17s. 6d. ; 201 to 300, £2 10s. ; 301 to 400, £3 5s. 9d. ; 400 and upwards, £4 2s. 2d. **Tonnage dues.** 4s 2d. per ton and 50 per cent.

AVEIRO, Portugal. Lat. 40° 38' 34" N ; long. 8° 43' W. Pop. About 7,500. **Tr.**—I. Coal, coke, iron, &c. ; E. Oil, wine, oysters, sardines, oranges, salt herrings, anchovies,

Charges. On a vessel of 263 tons, £26 10s. 1d. **Pilotage.** Vessels drawing more than 14ft, £7 ; less than 14ft, £5 ; less than 12ft, £3.

BANDHOLM, Denmark. Tr.—I. Manufactured goods, coals, iron, wine, timber, colonial produce, salt, manures, feeding stuffs ; E. Grain, especially wheat and barley, flour, butter, eggs, cheese, wool, hides, cattle, sheep, and pigs. **Accn.** 14ft at the entrance, the same inside the harb. (Danish feet). A slip for vessels up to 200 tons. Bandholm is on the N. coast of the Isle of Lolland. **Charges.** Government dues. Harb. dues 2½d reg. ton. **Pilotage.** From sea to harb., or *vice versa* :—From April 1 to Sept. 30, 1/3 foot ; Oct. 1 to March 31, 1/7½d. From the roads of Bandholm to the harb., April 1 to Sept. 30, 3½d ; Oct. 1 to March 31, 4½d foot.

BANGKOK, Siam. Lat. 13° 38' N ; long. 100° 27' E. **Pop.** About 500,000. Tr.—I. Tea, quicksilver, silks, porcelain, camphor, edible bird's nests, piece goods, opium, glassware, and copper ; E. Rice, sugar, teelseed, sapan wood, gums, teak, gamboge, pepper, cocoanut oil, horns, hemp, raw silk, ivory, hides, cardamoms, feathers, salt, and fish. **Accn.** The depth of water varies according to the season of the year from 3 to 5ft at LW. and 11 to 14ft at HWST. Dry dock. Shears to lift from 15 to 25 tons. **Charges.** On a barque for nearly two months of 737 tons £47 16s 5½d. **Pilotage.** 16/8 foot in, the same out. **Towage.** For a vessel of 427 tons £16 13s 4d up, and the same down.

BANGOR, Maine, U.S. Lat. 44° 47' 50" N ; long. 68° 47' W. **Pop.** 20,000. Tr.—E. Lumber, spruce, deals. **Accn.** Ships drawing 22ft can safely load and proceed to sea ; depth LW. in harb. 20 to 25ft. There is a slip railway of 300 tons capacity. **Charges.** Wharfage according to size 4/2 to 12/6 per 24 hours. Brokerage on freights 5 per cent. **Pilotage.** Not compulsory, about 6/3 foot. **Towage.** 5d per ton reg. each way, up and down, if only down 7½d per ton, and to sea £10 11s 5½d extra.

BARCELONA, Spain. Lat. 41° 23' N ; long. 2° 11' E. **Pop.** About 191,000. Tr.—I. Cotton, coals, coffee, cocoa, sugar and other colonial produce, amber, salt, fish, hides, iron, wax, hardware and horns ; E. Silk, soap, woollens, cottons, lace, hats, fire-arms, steel, paper, and ribbons. **Accn.** The harb. has a depth of from 2 to 4 fms. Vessels 15 to 20ft dft. can load within a cable length of wharves. A patent slip for vessels up to 800 tons. It is the most important seaport on the NE. coast of Spain. Crane power 20 tons ; shears to lift 30 to 50 tons. **Charges.** On steamer 1,000 tons coal £194 7s. **Pilotage.** On a steamer with 1,000 tons coal, in and out (16/8 each way) £1 13s 4d, mooring pilot 10/6.

BARI, Italy. Lat. 41° 8' N ; long. 6° 55' E. **Pop.** 80,000. Tr.—I. Coal, colonial produce, metals ; E. Wine, oil, almonds, barley. **Accn.** Vessels of large dft. anchor in 17 fms, one mile off B. ; depth alongside quay 23ft. Hand crane to lift 7 tons. **Charges.** Port charges on vessel of 800 tons, about £100 ; moorings, £1 0s. 10d. ; wharfage, £1 13s. 4d. **Pilotage** according to tonnage ; under 200 tons, £1 0s. 10d.

14ft dft. can reach the town at LW., and load to 16ft at this, or to 20ft at dock of Atlantic Mills and anchor near town. Vessels of 21ft dft. can cross the bar and ascend to within four miles of the town. **Pilotage.** See St. Helena Sound. **Towage.** About 4d to 5d reg. ton inwards, and 7½d outwards, but ships usually sail in.

BELIZE, British Honduras. Lat. 17° 29' 20" N ; long. 88° 11' 53" W ; this is the lat. and long. of Fort George on the N. side of the entrance to the river. **Pop.** Of colony about 27,500. **Tr.**—I. Chiefly breadstuffs, cotton manufactures, and hardwares ; E. Cedar, mahogany, rosewood, logwood, indigo, cochineal, sarsaparilla, cocoa-nuts, deer skins, tortoiseshells, sugar, and specie. **Accn.** The harb. has from 2½ to 4 fms of water, with the exception of one patch of 3 fms in the middle of the basin. The town of Belize stands on the S. mouth of the river. **Charges.** On a barque 454 tons £11 7s. Light dues 6d ton. **Pilotage.** 8/4 ft, in and out.

BENGAZI, N. Africa. Lat. 32° 6' 51" N ; long. 20° 2' 40" E. **Pop.** 10,000. **Tr.**—I. Cotton and woollen manufactures, sugar, iron, boards, spirits, wines, tobacco, oil, &c. E. Barley, wheat, cattle, wool, butter, skins, madder. **Accn.** No vessel drawing over 7ft can enter. **Pilotage.** 10/ to 20/, according to size.

BENI SAF, Algeria. Lat. 35° 19' 8" N ; long. 1° 20' E. **Pop.** 4,000. **Tr.**—E. Iron ore. **Accn.** A newly constructed commodious harbour of 45 acres. Workshop for repairing ships of all kinds. **Charges.** Port charges assimilate to those at other N. African ports. **Pilotage.** £1, in and out.

BERGEN, Norway. Lat. 60° 24' N ; long. 5° 20' E. **Pop.** 50,000. **THW.** f. and c. 1h 30m ; Sp. rise 4ft. **Tr.**—I. Grains, salt, iron and coal, hardware, coffee, sugar, wines ; E. Bones, codfish, dried herrings, cod oil, skins, &c. **Accn.** There is sufficient water for largest vessels, and a side harb. at suburb "Nöstet," where men-of-war and yachts always anchor. There is a slip 150ft in length, a patent slip, and 3 graving docks, ranging from 197ft to 240ft in length. Cranes to lift 4 tons. **Charges.** Tonnage and light dues 10½d ton, and 2% harb. money. **Pilotage.** According to size and dft., besides distance :—200 tons reg., 9ft dft., entrance money £1 2s 2d ; ditto distance money 2/7 mile ; 500 tons reg., 12ft dft., entrance money £1 18s 6d ; ditto distance money 4/5 mile ; 1,000 tons reg., 15ft dft., entrance money £2 18s ; ditto distance money 5/5 mile. The pilot stations on the coast or entrance to Bergen are :—Skudesnäs 20½m., Selboe Fjord 9m., Kors Fjord 4½m., Bommel Fjord 16½m., Sholmen 8m., Fele 8m. ; large vessels generally enter Kors Fjord.

BEYROOT, Syria. Lat. 33° 54' 27" N ; long. 35° 29' 4" E. **Pop.** 70,000. **Tr.**—E. Cotton, silk, galls ; I. Musl-ins, tin, hardware. **Accn.** Anchorage 10 to 12 fms, half-mile off ; exposed to winds. **Charges.** Port charges on vessel of 221 tons, drawing 16½ft, about £2 3s 4d.

BILBAO, Spain. Lat. 43° 15' N ; long. 2° 45' W. **Pop.** About 30,000. **THW.** 3h ; Sp. rise 13ft. **Tr.**—I. Cotton and woollen manufactures, colonial produce, dried cod, coal, coke, timber, &c. ; E. Iron, fruits, grain, oil, flour, ore, wine, madder, liquorice, skins, chestnuts, &c. **Accn.** The depth of water on the

season, and in addition thereto an extra rate of Rs. 20-10 on ships, and Rs. 12-6 on steamers during SW. monsoon. Transporting fees on ships:—1,500 tons and upwards, Rs. 30; 1,000 tons to 1,500 tons, Rs. 25; under 1,000 tons, Rs. 20. Steamers using their own engine: from one berth to another south of Cross Island or to or from any of the docks or to any berth north of Cross Island, or *vice versa*, Rs. 20; transporting north of Cross Island Rs. 15; sailing ships or steamers towed to or from any dock north of Cross Island from or to fixed moorings north of Cross Island will be charged Rs. 15. A pilotage fee shall be held to cover the services of a pilot for all duties connected with the movement and anchorage of a vessel for a period of at least 12 hours from the time of joining the vessel if his services are required for so long. If a pilot, after having been applied for, goes on board and the vessel is not ready to proceed to sea, or to move from one part of the harbour to another part, or to dock, as the case may be, the same day, a fee of Rs. 20 will be charged as "Pilot's attendance." When a pilot is appointed to transport a vessel into dock and it does not enter the dock the same day, if through no fault of the pilot, a second transporting fee will be charged, if the vessel is docked by the pilot on the following or on any subsequent day. For vessels (steamers) of under 1,000 tons burthen (registered) whose masters have obtained a pilot's licence for the outer harbour, half pilotage fees only will be charged when the said masters pilot their steamers from or to the Sunk Rock Light. Special Pilotage for taking a vessel to Hog Island, Butcher's Island, or Nocar Point, a single pilotage fee shall be charged instead of transporting. For vessels proceeding on a trial trip a single pilotage fee shall be charged instead of transporting. Vessels arriving with gunpowder, if not moored in the harbour on the day of arrival, shall pay an attendance fee of Rs. 20. NOTE.—Rupee = 1/5. Towage. Carija Bay £30 each way. Steamer towed will be charged at sailing ship rates.

BONA, Algiers. Lat. 36° 53' 38" N; long. 7° 46' 4" E. Pop. 30,000. Tr.—I. General merchandise and manufactures; E. Iron, copper, zinc, barley, wool, sheep, cork, tannin, and hay. Accn. Two ports (inner and outer). Harb. formed by two breakwaters. The inner port is provided with quays where vessels drawing 19ft can discharge. Charges on a vessel 600 reg. tons, £92. Pilotage. 1½d reg. ton for sailing vessels, and ½d for steamers each way, in and out. Mooring cable 9½d. On steamer of 600 reg. tons coming from a foreign port loaded with 1,000 tons of wood, and leaving with 1,000 tons minerals ½d ton, coming in, and going out 28/. Mooring cable 9½d. On sailing vessel of 300 reg. tons from a foreign port, cargo in and ballast out, in 1½d reg. ton, out 28/. Mooring cable 9½d.

BONNY, Africa. Lat. 4° 23' 7" N; long. 7° 7' 0" E. Pop. 10,000. Tr.—I. Manchester goods, guns, powder, iron neptunes or brass pans, crockeryware, hardware, &c.; E. Palm oil, ivory, &c. Accn. Anchorage in Bonny river in 10 fms. Least depth of water on bar 19ft low water. Springs rise 6ft, neaps 5ft. No port dues.

BORDEAUX, France. Lat. 44° 50' N; 0° 34' W. Pop. 240,000. THW. 6h 50m; Sp. rise 14ft; N. rise 12½ft. Tr.—I. Colonial produce, wood, hides and skins, fish, cereals, wine, and spirits; E. Wine, spirits, fruit,

from Nov. 1 to May 1, from $7\frac{1}{2}$ to $21\frac{1}{4}$. 25 % to be added to the rates of pilotage on vessels detained in quarantine over 12 hours. All national vessels of 15ft or less dft. of water 16/11 foot, over 15ft dft. $21\frac{1}{4}$ foot. The fee for hauling a vessel from the stream to a wharf (below the bridges), after the expiration of 24 hours from arrival is 16/11, and the same amount for hauling a vessel from a wharf to the stream, provided the vessel does not proceed to sea within 24 hours from the time of anchoring. **Towage.** On a vessel of 174 reg. tons from Pernambuco with cargo of sugar, outwards in ballast, inwards £1 9s 7½d.

BOULOGNE, France. Lat. $50^{\circ} 44'$ N; long. $1^{\circ} 35'$ E. Pop. 45,916. **Tr.**—I. Coal, cast iron, steel, machinery, flax and tow, cotton, wool; E. Cement, fruits, potatoes, flour, silks, wine, brandy, eggs. **Accn.** Floating dock. On the bar at ST. about 28ft, NT. 17ft. Inside the harb. at ST. 19ft, NT. 12ft. Vessels drawing 28ft can enter dock at ST., and those drawing 22ft at NT. Owing to frequent heavy rise of sea and shifting sand-bank bearing SW. from the jetty, no greater depth can safely be counted on than $22\frac{1}{2}$ ft at ST., and $16\frac{1}{2}$ ft at NT. A gridiron 251ft long, and another 62ft long for small vessels. Steam cranes to discharge 800 tons per 10 hours. **Charges.** Port charges on a sailing vessel of 100 reg. tons £9 6s; on a steamer of 300 tons £15 10s 6d. Commission and brokerage 5%. **Pilotage.** Sailing vessels, in or out, loaded 2½d ton, in ballast 1½d; steamers half this charge. Vessels having more than one-third of their cargoes pay full rates. Vessels windbound or in distress pay two-thirds. **Towage.** 3d. per reg. ton. **Eng. Brokers.** G. Dewismes, G. Huret, L. Sellier.

BRAAKE, Germany. **Tr.**—I. Timber and lumber from the Baltic and United States, cedar, mahogany, coal, pig-iron, fire-bricks, slags, flint, china clay, slates, corkwood, tar, grain, hemp, and nitrate; E. Sugar, moss litter, cork, bottles, German coal, coke, steel rails, iron in bars, all kinds of machinery, tobacco, and manufactures. **Accn.** Vessels drawing 18ft can enter the harb., a good dock 800ft long, 350ft wide, provided with a lock and offering every facility for shipping. The dock has been enlarged by a side basin 700ft long, and 150ft wide. Two graving docks, 313ft and 343ft in length. This is a free port. Labour and all supplies are cheap. Ballast about 1/1 ton. Cranes to lift to 20 tons. **Pilotage.** From April 16 to September 15, 11/7 for every 3ft dft.; from February 16 to April 15, and September 16 to November 15 about $\frac{3}{4}$ foot; and from November 16 to February 15 about $\frac{3}{4}$ foot. For vessels piloted into dock, a compulsory rate is charged:—up to 90 reg. tons 3/11, up to 120 reg. tons 4/10½, up to 150 reg. tons 5/10½, above 150 reg. tons 7/10. Out of dock:—up to 90 reg. tons 2/4½, up to 120 reg. tons 3/2½, up to 150 reg. tons 3/11, above 150 reg. tons 5/2.

BREMEN, Germany. Lat. $53^{\circ} 48'$ N; long. $8^{\circ} 8'$ E. Pop. 115,000. THW. 1h 40m; Sp. rise 11ft. **Tr.**—I. Chiefly tobacco, coffee, sugar, cotton, coal, iron, petroleum, yellow metal, machinery, rice, skins, dye woods, wines, timber, hemp; E. Woollen goods, linen, glass, wheat, beans, sheep, rags, wool, oil-cake, wooden toys. **Accn.** 3 large docks and 5 dry docks. Vessels of 22ft dft. can enter any one of the docks. Cranes to lift 1½

fees 4/2 to 16/8. No harb. dues. **Pilotage.** On vessel of 888 reg. tons, 20½ft dft., up the river £3. **Towage.** According to size of vessel, from £1 0s 10d to £7 6s.

BRINDISI, Italy. Lat. 40° 39' 27" N; long. 17° 58' 45" E. Pop. About 20,000. **Tr.**—I. Coal, sugar, coffee, wheat, and flour; E. Olive oil, wine, and country produce. **Accn.** Vessels drawing 25ft can lie alongside quays; no dry dock accommodation, but the harb. is safe and large. **Charges.** Expenses of a steamer of 1,250 tons net reg., with a cargo of 2,200 tons of coal inwards, empty outwards, 3 to 4 days in port, about £160. **Pilotage.** From 15s 10d for vessels of from 1 to 100 reg. tons, to £2 19s 3d for vessels of 1,001 tons and upwards inward. Sailing vessels pay the same outward, but steam pay half rate outward, 3s 11½d for mooring ship, and 3s 11½d to pilot-boat for assisting.

BRISBANE, Australia. Lat. 27° 28' S; long. 153° 6' E. Pop. 51,680. **Tr.**—I. General merchandise; E. Coal, sheep, wool. **Accn.** Vessels of 20ft come to wharves with good tides. **Charges.** Wharfage 2s per ton; ballast 4s 6d; per ton; entering and clearing at Custom House, £2 2s. **Pilotage.** Above bar 6d per ton, above pilot station 5d per ton.

BRUGES, Belgium. Pop. 46,274. **Tr.**—I. Wool, cotton, dye-wood, wine, grain, coal, salt, wood, metals, &c.; E. Lace, cattle, chicory, oak bark, rags, bones, marble, fruits, and hay. **Accn.** Average depth 15ft; vessels drawing 13ft can easily pass through. **Charges.** On a vessel of 92 tons, about £9 7s (*via* Ostend). **Towage.** By horses. 2 horses cost 16/ to 20/; 3, 20/ to 24/; and 10d to conductor.

BRUNEI, Borneo. Lat. 4° 52' 40" N; long. 114° 55' 20" E. Pop. 15,000. **Tr.**—I. (Almost entirely from Singapore). Cotton cloths, gold thread, brassware, iron, rice, opium, tobacco, salt, earthenware, gunpowder, &c.; E. Sago flour, indiarubber, gutta percha, bees' wax, birds' nests, hides, and sharks' fins. **Accn.** Vessels of 20ft dft. can at H.W. safely ascend to the town. **Charges.** By treaty with Great Britain a duty of \$1 ton is leviable on British shipping in lieu of all other charges. **Pilotage.** No pilots obtainable.

BRUNSWICK, U.S. Lat. 43° 55' N; long. 69° 57' W. Pop. 7,500. **Tr.**—E. Lumber, cotton, timber, naval stores, moderate shipments of staves, shingles, cross ties, wool, hides, tallow, &c. **Accn.** Vessels can cross the bar with 20ft water NT., and 23ft ST. Distance from bar to Brunswick 13 miles. **Pilotage.** For St. Simon's Bar and Turtle River, foreign vessels not exempt by treaty with United States 50% additional. Varies from £2 10s 9d (bar) and £1 5s 4½ (river) to £27 9s 9½ (bar), and £13 14s 10½d (river), according to dft. A deduction of 20% on these rates made on pilotage of steam vessels. **Towage.** 7½d ton on loaded vessels.

BRUSSELS, Belgium. Lat. 50° 51' N; long. 4° 20' E. Pop. 410,000. **Tr.**—I. Biscuits, preserved goods, cement, wine, timber, cheese, cotton goods, wood, &c.; E. Plate and window glass, iron, sugar, marble, glassware, candles, nails, &c. **Accn.** Is connected with Willebroek by a canal with sufficient depth of water to allow vessels and steamers drawing not more than 10ft to come up to the city. Crane to lift 15 tons. **Charges.**

10 tons. **Charges.** No port dues. Foreigners pay 5% duty *ad valorem* on all exports and imports. **Pilotage.** To or from the outer roads about 1/1 foot dft. Pilots for Bussorah can also be obtained here. To and from Bussorah, or each time the bar is crossed, about 10 7/4 ft dft., and in addition about 1/1 subsistence money per day as long as the vessel remains at Bussorah.

BUSSORAH, Turkey. Lat. 30° 29' 30" N ; long. 47° 34' 15" E. **Pop.** 8,000. **Tr.**—I. Coal, refined sugar, metals, piece goods ; E. Dates, grain, carpets, pearls, wool, cotton, gall-nuts, drugs, &c. **Accn.** Vessels drawing 18ft have ascended as far as Bussorah. 22ft on the bar at HWST., 15ft at NT. Inside the bar and as far as Bussorah the least depth in mid-channel is 24ft. **Charges.** Discharging or loading cargo costs 10d to 1/8 per ton. **Pilotage.** See Bushire.

CABARETE, Hayti. Lat. 19° 47' N ; long. 70° 28' W. **Tr.**—E. Mahogany and tobacco. **Accn.** Vessels of 400 tons can enter and anchor in 3 to 4 fms of water about two cable lengths from the shore. **Pilotage.** On a vessel of 206 reg. tons, in and out £7 5s 10d. On a schooner of 130 reg. tons, ballast in, cargo of tobacco and mahogany out £1 19s 9d.

CABUL.—See Kurrachee.

CADIZ, Spain. Lat. 36° 27' 45" N ; long. 6° 12' 16" W. **Pop.** About 70,000. **Tr.**—I. Coal, alcohol, iron, staves, timber, and colonial produce ; E. Wine and salt are the staple articles of export ; olives, olive oil, fruits, metals, corkwood, grain, &c., are also exported in large quantities. **Accn.** There are 3 graving docks, owned by the Government, 193ft, 240ft, and 344ft in length, a graving dock 557ft long, and slip for vessels up to 136ft long, owned by the Compañía Trasatlantica. Cranes to lift from 5 to 8 tons. **Charges.** On a vessel of 150 reg. tons, coal in, cargo salt out, about £130. **Pilotage.** Sea to bay £1 17s 8d, bay to sea £1 14s 7d ; Puntales to sea, anchoring in the bay £3 3s 9d ; Puntales to sea, without anchoring £2 1s 8d ; Trocadero to Puntales £1 11s 4d, Trocadero to sea, anchoring in the bay £4 15s 2d, Trocadero to sea without anchoring £4 2s 8d ; Arsenal to bay £2 6s ; Trocadero to bay £2 11s 1d ; shifting in the bay or Puntales 16/9 ; Arsenal to sea, without anchoring in bay £4 7s ; anchoring £4 13s 1d ; ships leaving or entering the bay between sunset and sunrise £3 3s 9d. Should a vessel be hailed on entering by a pilot, and not take him, the vessel is liable to pilotage ; but if she enters without being seen the pilotage is not claimed.

CAEN, France. Lat. 49° N ; long. 0° 21' W. **Pop.** 63,809. **Tr.**—I. Principally coal, pig-iron, cement, wood, coal tar, pitch, cotton, &c. ; E. Wheat, barley, stone, potatoes, vegetables, cattle, oilcake. **Accn.** There is an inner wet dock, the quays extending about 1,300 yards (circular). The outer basin, newly constructed, has a length of quay of 630 yards, depth of water 16ft. Vessels of 350 to 450 tons discharge and take in cargo alongside the quay in the floating basin. Cranes to lift from 15 to 20 tons. **Pilotage.** On vessel of 100 reg. tons inwards (loaded) 25/ ; outwards (loaded) 16/10. In ballast half this rate. **Towage.** By horses for vessel of 100 tons 15/10 to 19/9 ; into canal 4d

boats of 400 tons can now reach Calais. Depths at high water :— Pier-head : Spring tides 34ft ; neap tides 30ft. Dock gates on lock sills : Spring tides 29ft 2in ; neap tides 25ft 1in. South quay of tidal basin : Spring tides 46ft 5in ; neap tides 42ft 4in. Same quay at low water : Spring tides 25ft 3in ; neap tides 30ft 2in. Wet dock : Spring tides at high water 30ft 3in ; neap tides at high water 26ft 2in. There are no sandbanks or rocks outside Calais harb., and the depths of water are greater than at pier-head. Crane to lift 10 tons. **Charges.** On a vessel of 100 tons £4 15s, ballast 8d to 1s ton. Dues on a vessel of 1,222 reg. tons coming from India, America, &c., full cargo, dft. 20ft, about £12. **Pilotage.** 2½d reg. ton loaded vessels ; half for ships in ballast. Inwards from the roads on a vessel of 222 reg. tons 2½d. Extra pilotage at sea, if taken further than 8m, one-fifth. Outwards £6 4s 6d. In ballast 1½d reg. ton. Steamers pay for pilotage, loaded or in ballast 1½d reg. ton. **Towage.** On vessel of 1,222 tons coming from India, America, &c., with full cargo and drawing 20ft :—inwards, about 4d reg. ton £19 7s (1m about 4d ; 1m to 3m about 6d ; 3m to 6m about 7d) ; outwards £7 6s 6d (if a steamer up to 1,000 reg. tons about £3). **Eng. Brokers.** A. Duniagou, G. Foissey, A. Henry, A. Hobacq.

CALCUTTA, India. Lat. 22° 33' N ; long. 88° 20' E. Pop 683,458. **Tr.—I.** Salt, coal, iron, piece goods, cotton yarn, wearing apparel, stationery, hardware, machinery, malt liquors, wine and other spirits, petroleum, flour, tobacco, &c. ; E. Cotton, rice, dye stuffs, oils, seeds, shawls, hides, spices, cutch, gunny cloths, hemp, indiarubber, jute, opium, safflower. **Accn.** Ships of 5,500 tons can ascend to city, where there is jetty and mooring accommodation. The pilots practically take vessels of any dft. up and down the river, but the maximum dft. may be called 25ft. Below Saugor it is left to the pilot's discretion whether he will pilot a vessel drawing more than 22ft of water. There are nine graving docks, running from 180ft to 352ft in length, and three dry docks of from 174ft to 192ft in length. **Charges.** Tonnage dues 6d ton. Harb. master's fees vary according to the work required of him. Hospital dues 1d. Light dues 1d ton. Stevedore 7d ton. **Pilotage.** Outwards from within the port to below Fort Gloucester 1-12th ; Hog River Obelisk 2-12ths ; the Anchoring Creek 3-12ths ; Diamond Harb. Telegraph Station 4-12ths ; Rangafulla Obelisk (SE.) 5-12ths ; Mud Point Telegraph Station (ESE.) 6-12ths ; the Fairway Buoy of Bedfords or the lowermost buoy of the Auckland, if in that channel 7-12ths ; the Apex Buoy of Bedfords or the A Buoy of the Western Channel, according to the channel used, 8-12ths ; a line E. or W. of Saugor anchoring buoy or of the H Buoy for the western channel, 9-12ths ; a line ENE. or WSW. of the lower Gaspar light-vessel for the eastern channel or WSW. of the lower eastern reef head passage buoy for the south channel, 10-12ths ; a line ENB. of the Spit Buoy for the eastern channel or WSW. of the south channel reef buoy for the south channel, 11-12ths ; a line drawn E. and W. of the lower reef buoy or the pilot station, full. Inwards, to within the port, exactly the same rates as above, and with the same divisions. In place of reading "To below," read "From below." Intermediate or broken pilotage is calculated by simple subtraction of the proportion leviable for the shorter distance from that chargeable to the

Pilotage. $3/2\frac{1}{2}$ for 6ft dft. per four English miles, $1/7\frac{1}{2}$ for every additional foot. On a vessel of 100 reg. tons, with cargo in and out, 10ft dft. $12/2\frac{1}{2}$.

CAMPECHE, Mexico. Lat. $19^{\circ} 50' N$; long. $90^{\circ} 35' W$. Pop. 16,000. Tr.—I. Silks and manufactured goods; E. Wood, salt, sugar, skins, wax, &c. Accn. Anchorage perfectly safe; vessels drawing 10ft can approach to within a mile of coast.

CANDIA, Turkey. Lat. $35^{\circ} 21' N$; long. $24^{\circ} 01' E$. Pop. 20,000. Tr.—I. Calico, cotton twist, flour, leather, sugar, rice, barley, &c.; E. Olive oil, soap, wine, raisins, &c. Accn. Harb. very narrow, 11 and 12ft inside where it is quite safe. Pilotage. 10/ on entering and 10/ on clearing. Mooring expenses about £1 5s.

CANEA, Turkey. Pop. 14,000. Tr.—I. Calico, cotton twist, flour, leather, sugar, rice, barley, tobacco, timber, coffee, woollens, rum and spirits, iron, soda ash, codfish, herrings, jute, sacks, coals, &c.; E. Olive oil, soap, wine, carobs, raisins, oranges, valonia, cheese, &c. Accn. Harb. has 15ft at entrance, but 12ft only where ships moor. Charges. Mooring 25/. Pilotage. 8/ to 12/ in or out.

CANNES, France. Lat. $48^{\circ} 48' N$; long. $9^{\circ} 11' E$. Pop. about 14,000. Tr.—E. Perfumery, oil, and soap. Accn. There is 15ft of water in the harb., which is protected by a mole, and has a fine quay. Eng. Broker. Janot.

CANTON, China. Lat. $23^{\circ} 7' 10'' N$; long. $113^{\circ} 14' 3'' E$. Pop. Estimated 1,600,000. Tr.—I. Opium, cotton and woollen piece goods, and native imports, such as silk, tea, and cotton goods; E. Tea, silk, matting, preserves, &c. Accn. 13 to 17ft on the bar. Vessels of 1,000 tons can ascend as far as Canton. Almost all steamers lighten at Whampoa, about 14 miles below Canton, and all sailing vessels anchor there. Charges. Tonnage dues 2/ reg. ton, which include harb. light, mooring dues, &c. Pilotage. Whampoa to Hong Kong, or *vice versa*, 6 to 9ft dft. £2 12s 1d; 10 to 18ft dft. £5 4s 2d; 19ft dft. £6 5s; 20 to 22ft dft. £8 6s 8d. Canton to Whampoa, or *vice versa*, any dft. £2 1s 8d. Towage. Included in pilotage.

CAPE HAYTIEN, Hayti. Lat. $19^{\circ} 46' 40'' N$; long. $72^{\circ} 10' 42'' W$. Pop. About 9,000. Tr.—I. Lumber, provisions, fish, hardware, tobacco, and naval stores; E. Coffee, cocoa, logwood, honey, and hides. Accn. Vessels of 18ft dft. can approach to within three cable lengths of the town, and there is an excellent quay at which vessels drawing 15ft can discharge and load. Charges. On a 400 ton vessel, ballast in, cargo out £29 1 13s 4d. Pilotage. On a vessel of 400 tons, ballast in and cargo out, in and out and signal £2 18s 4d; to the Government £2 14s 2d and 20 per cent additional; to ballast ground £1 5s.

CAPE TOWN, Africa. Lat. $33^{\circ} 56' 3'' S$; long. $18^{\circ} 28' 45'' E$. Pop. 30,000. Tr.—I. Woollens, cottons, hardware, furniture, haberdashery, paper, books, tea, sugar, teak, &c.; E. Corn, wool, wine, hides, skins, horns, aloes, butter, beef, ivory, argol, dried fish, whale and seal oil, copper ore, diamonds, &c. Accn. Two docks or basins (inner and outer), inner entrance

Bocachica). The dues are as follows, in case the vessel is taken outside Bocachica :—Steamers £2 1s 8d, barques £1 13s 4d, brigs £1 5s, schooners 16/8. When the vessel is taken at Bocachica these dues are reduced half.

CATANIA, Italy. Sicily. Lat. 37° 28' N ; long. 15° 5' E. Pop. About 106,000. Tr.—I. Manufactures on a large scale. Colonial: Iron, coal, machinery; E. Sulphur, wheat, barley, rice, beans, maize, linseed, hempseed, oranges, lemons, almonds, shumac, and a large variety of other produce. Accn. A large harb., capable of accommodating, with facility and safety, the largest ships. Charges. Port charges for a vessel of 317 tons £15 6s 4d. Pilotage. Inwards: to 50 reg. tons 11/10½; 51 to 100, 19/9; 101 to 150, £1 3s 9d; 151 to 200, £1 7s 8d; 201 to 250, £1 12s 5d; 251 to 300, £1 18s; 301 and upwards, £2 3s 6d. Outwards: Half of above according to tonnage by applying to the head pilot at the Health Office. In above charges, mooring and unmooring the ship is also included.

CAUDEBEO, France. River Seine. Eng. Broker. Renault.

CAYENNE, S. America. Lat. 4° 56' 25" N ; long. 52° 20' 36" W. Pop. 11,000. Tr.—I. Cotton, loaf sugar, flour, skins, mining implements, preserved provisions, and manufactured goods; E. Maize, coffee, rice, tobacco, pepper, cocoa, indigo, vanilla, gums, woods, hides, &c. Accn. Two quays. Vessels drawing more than 14ft anchor 6 miles from C. Tides rise 6 to 7ft. No graving docks.

CEARA, Brazil. Lat. 3° 42' 5" S ; long. 38° 27' 31" W. Pop. 35,000. Tr.—I. Breadstuffs, general merchandise, manufactured goods, metals, leather, wine, and machinery; E. Cotton, hides, indiarubber, sugar, &c. Accn. Anchorage in 4 to 5 fms. Harb. formed by a reef of rocks running parallel with the beach, and about 400yds distant. Charges. On a vessel of 383 tons arriving in ballast and loading cargo of cotton and indiarubber £258 5s 10d. Pilotage. On vessel of 383 reg. tons arriving in ballast, and loading a cargo of cotton and india-rubber, inward £2 14s, outward £2 5s.

CETTE, France. Lat. 43° 24' N ; long. 3° 42' E. Pop. 37,000. Tr.—I. Principally coal tar, pitch, staves, wheat, oats, beans, coal, tallow, petroleum, oranges, citrons, wood, iron ore, and also large quantities of Italian, Spanish, Dalmatian, and Greek wines; E. Salt, wine, spirits, fruits, brandy, and French coal from the mining districts of the departments of Hirault, Gard, and the Centre. Accn. Three basins, the Old Port, the New Port, and the basin of the S.W. Ry. Co. The harbour is protected by a breakwater running E. to W., forming two entrances. Vessels drawing 21ft can enter. The old basin or port admits vessels drawing 18ft; the New Port and S.W. Ry. Co.'s basin, vessels of 17ft. There are five pontoons for heaving down vessels of 1,200 tons. Charges. On a vessel of 250 reg. tons about £33. Pilotage. 1st Line :—Six miles distance from entrance during the day, and three miles distance during the night, 3½d reg. ton. 2nd Line :—Three miles distance from the entrance during the day only, or if the vessel is taken between the first and second line by the pilot 2d reg. ton. 3rd Line :—If the vessel is taken by the pilot between the

gridiron, and careening quay. Cranes to lift from $\frac{1}{2}$ to 2 tons. **Charges.** On a vessel of 100 reg. tons £6. **Pilotage.** On a vessel of 100 tons, inwards £1 3s 8d; outwards 11/10; steamers (laden) half sailing vessels, sailing vessels in ballast two-thirds of rates. **Towage.** On a vessel of 100 tons about £1 0s 10d. **Eng. Brokers.** E. Bunot, A. M. Langlois, E. Lelot.

CHICAGO, U.S. Lat. $41^{\circ} 50' N$; long. $88^{\circ} W$. Pop. About 550,000. **Tr.**—I. Lumber, coal, iron, and general merchandise; E. Grain, flour, wool, beef, pork, timber, and hides. **Accn.** Vessels bound here from sea pass through St. Lawrence, the locks of which are about 43ft wide and 220ft long, with 9ft of water. There are 15ft of water in Chicago harb. There is a new canal with locks 302½ft long and 48½ft wide, and 11½ft deep. **Charges.** On vessel of 348 tons, cargo of iron and general merchandise in and grain out £170 7s 2d. **Towage.** £2 2s 3½d to £21 2s 11d according to size of vessel and distance.

CHITTAGONG, India. Lat. $22^{\circ} 14' 24'' N$; long. $91^{\circ} 50' E$. Pop. 100,000. **Tr.**—I. Liverpool salt in large quantities, and kerosine oil; E. Jute, rice, cotton, and tea. **Accn.** There is accommodation for 16 vessels in swinging moorings, and 3 vessels in fixed moorings. Ships of 22ft can generally cross the bar at all times. Springs rise 15ft, and in the rains 19 to 20ft. **Charges.** On a ship of 1,400 tons reg. Rs 3/3 per reg. ton, exclusive of commission on freight and towage. **Pilotage.** From £5 for vessel of 11ft dft. to £26 for vessel of 22ft dft. For every foot above 22 an additional sum of £3 4s is charged; half rates for steamers under steam, two-thirds for vessels taking the aid of steam. **Towage.** There are no regular steamtugs; but vessels, when loaded, can always be towed to sea by one of the mail steamers, two of which leave weekly.

CHRISTIANIA, Norway. Lat. $59^{\circ} 54' N$; long. $10^{\circ} 55' E$. Pop. 131,000. **Tr.**—I. Wood, oil cakes, ice, herrings, beer, manufactured goods, skins, ores, paper pulp, matches. **Accn.** Vessels drawing 17ft to 18ft can lie alongside quays. A graving dock 268ft in length, and a floating dry dock 195ft long. Cranes to lift from 2 to 40 tons. **Charges.** Vessels of 270 tons, drawing 14ft, about £46 12s. Provisions plentiful and cheap. **Pilotage.** For taking a vessel from the ballast station, or any part within the islands, and bringing her to the anchorage designated by the harb. master and mooring her:—From 2/2 for vessels of 40 tons and under, to 9/3 from 700 to 800 tons, and 10/10 for above 800 tons. If tugboat is employed, 25 per cent. deduction. **Towage** is cheap and tugboats are always at hand.

CHRISTIANSAND, Norway. Lat. $58^{\circ} 4' 27'' N$; long. $8^{\circ} 2' 25'' E$. Pop. About 13,000. **Tr.**—I. Manufactured and colonial goods, grain, salt, coals; E. Timber, planks, cattle, salted fish, skins, lobsters, oak-bark, paper, &c. **Accn.** The harb. is one of the finest in Norway, with 12 fms of water close to town. A large dry dock, 320ft in length, and every facility for repairs. Cranes to lift 2 tons. **Charges.** No tonnage dues, except a charge of 11d on each ton of merchandise discharged.

CHRISTIANSTED, Santa Cruz, W.I. Lat. $17^{\circ} 45' N$; long. $64^{\circ} 41' W$. Pop. About 25,000. **Tr.**—I. Flour, corn, meal, pork, candles, lard, timber, shingles, agri-

areca-nuts, cocoanut oil, coir, plumbago, arrack, tobacco, and pearls. **Accn.** Outer roadstead with good anchorage in 8 fms water, and inner road or harb.—mostly occupied by native coasting vessels—with good and safe anchorage for vessels drawing 11ft. A mole has been commenced, to run out from the custom-house 1,200yds N., and then NE. 400yds. **Charges.** Port dues 2d ton for entry inwards, and at the rate of 2d ton for clearance outwards, on all vessels arriving at or departing from this or any other port of the island. **Ships' expenses** vary very much according to circumstances. On a vessel of 678 tons, cargo outward only, about £160. **Pilotage.** Vessels of 200 tons are bound to pay pilotage. Vessels are boarded about a mile outside the shipping. The rate is 30/ for both ways. Cranes to lift 20 tons.

COLON or ASPINWALL, U.S. Columbia. Lat. $9^{\circ} 22' 53.7''$ N; long. $79^{\circ} 52' 58.2''$ W.

Pop. about 3,000. **Tr.**—I. Coal and general cargoes; E. Ivory-nuts, cocoa-nuts, indiarubber, mother-of-pearl shells, hides, and cargoes in transit from the North and South Pacific, consisting of pearls, precious stones, silks, jewellery, teas, silver and copper ores, indigo, cochineal, coffee, cocoa, cotton, Peruvian bark, Panama hats, and general merchandise of all kinds. **Accn.** Vessels drawing 26ft can lie alongside the wharves. **Pilotage.** No fixed tariff, from £3 2s 6d to £5 4s 2d, according to size of vessel.

COLUMBIA RIVER, U.S. Lat. $46^{\circ} 16' 43''$ N; long. $124^{\circ} 40' 7''$ W. **Pop.** 15,000. **Accn.** The depth of water on the bar varies from 17 to 24ft at mean LT. Vessels of 20ft dft. can always be loaded at Portland, which is about 110 miles from the mouth of Columbia River. **Pilotage.** On a vessel at Portland, in and out over the bar at the mouth of Columbia to Astoria up to 12ft £1 13s 10d foot, for each additional foot £2 2s 3½d; this is each way, in and out. From Astoria, up and down, 16/11 foot each way. **Towage.** On a vessel at Portland:—In and out over the bar at the mouth of the Columbia river to Astoria £52 17s 3½d to £84 11s 8d, according to distance towed, including use of hawser in and out. From Astoria to Portland rates are made by private bargain, and range from £42 5s 10d to £116 6s for the round tow up and down.

CONCEPCION BAY, Chili. Lat. $36^{\circ} 42'$ S; long. $73^{\circ} 6'$ W. **Tr.**—E. Wheat, hides, and tallow.

Accn. The bay, in which there is everywhere good anchorage, has three ports, Talcahuano, Penco, and Tomé. Talcahuano has a pop. of 4,500. Vessels anchor there in four to six fathoms at six to seven cable lengths from the shore. Discharging and loading are done by lighters. Repairing resources very limited owing to the absence of docks. Tomé has a jetty 50yds long. **Pilotage.** On a vessel of 750 reg. tons £2 18s 8d inwards.

CONSTANTINOPLE, Turkey. Lat. 41° N; long. 29° E. **Pop.** 750,000. **Tr.**—I. Manufactures

of every kind of colonial produce, coals, iron, lead, copper, tin, earthenware, glass, timber, &c.; small quantities of grain arrive from Black Sea for transshipment; E. Grain, wool, cotton, box and dry woods, silk, opium, tobacco, goatskins, rags, bones, drugs, otto of roses, carpets, &c. **Accn.** The harb. is deep enough to float vessels of the largest size; safe and commodious, and is buoyed. There are four graving docks, 250ft, 290ft, 298ft, and 320ft long, a floating dry

CORFU, Ionian Islands, Greece. Lat. $39^{\circ} 37' 7''$ N; long. $19^{\circ} 56' 50''$ E. Pop. 78,024. Accn. Harb. safe, and protected by mole. Suitable for vessels drawing 12ft. Charges. On vessel of 246 tons, £12 os 8d.

CORONEL, Chili. Pop. 5,658. Accn. Anchorage in 9 fms. Two piers with tramways and wagons. Vessels discharge at their anchorage into launches.

CORRALIES, Mexico. Lat. $20^{\circ} 25' N$; long. $105^{\circ} 39' 2'' W$. Pop. 8,000. Accn. A small but very deep harb. Depth of water in middle of basin or inner harb. is about 30 fms.

CORUNNA, Spain. Lat. $43^{\circ} 22' N$; long. $8^{\circ} 22' W$. Pop. 40,000. THW. 3h; Sp. rise 15ft. Tr.—I. Coal, iron, ivory, rails, maize, sugar, tobacco, &c.; E. Oxen, potatoes, onions, fish, eggs, &c. Accn. It is a safe and well sheltered harb., and capable of receiving the largest vessels. Charges. On a schooner of 80 tons, loaded in and out, about £16 5s. Pilotage:—

	Tons. From 50 to 100. £ s. d.	Tons. From 101 to 200. £ s. d.	Tons. From 201 to 300 £ s. d.	Tons. From 300 upwards. £ s. d.
From outside the shoals to the anchorage ground.....	1 5 0	1 7 6	1 15 5	2 1
From the lighthouse and Marola	0 18 9	1 2 9	1 7 6	1 3
From Cape Pradeia or Serijo Blanco.....	0 12 6	0 13 9	0 17 8½	1 0 10
Steamers of 200 tons and upwards	£1 7s 6d.			

CRAPAUD, P.E.I. Lat. $46^{\circ} 12' N$; long. $63^{\circ} 30' W$. Pop. 500. Tr.—I. Cottons, linens, wool, silk, tea, coffee, tobacco, oils, tar, and spirits; E. Oats, barley, buckwheat, vegetables, butter, cheese, canned lobsters, &c. Accn. There are three wharves with 14ft alongside at LW., 15ft to 18ft HW. Charges. Light dues 4d ton, payable once a year. Pilotage:—

	1st Div. s. d.	2nd Div. s. d.	3rd Div. s. d.
80 and under 125 tons	5 2½	8 4	13 6½
125 „ 250 „	7 3½	9 4½	14 7
250 „ 350 „	8 4	10 5	15 7½
350 „ 450 „	9 4½	13 6½	17 8½

All vessels exceeding 450 tons ½d ton each way for the excess of tonnage above 450, in addition to the above rate for 450 tons. Where vessels have to be moved about the wharves and pilots retained by captains of vessels for such services, said pilot is not allowed to charge more than 6/3 for each and every tide, to be left to the captain's option to employ pilot for such services.

CRONSTADT, Gulf of Finland. Lat. $59^{\circ} 59' 43'' N$; long. $29^{\circ} 46' E$. Pop. 30,000. Tr.—I. Sugar, cotton, petroleum, liquors, dry goods, salt, coals, &c.; E. Lumber, hemp, tallow, canvas, leather, bristles, hides, cordage, &c. Accn. Merchants' harb. will contain over 500 vessels of any size. Only vessels with coals and pig-iron discharge here; all general cargoes go up to St. Petersburg. There are three graving docks for the largest ships of war and floating dry docks for vessels of 3,000 tons. Although the property of the Government, they are open to the public at moderate charges. Charges. On a vessel of 150 reg. tons dft. 12ft including labour £25 10s. Pilotage. On a vessel of 153 reg. tons, cargo in and out, 12ft dft., in and out £2 15s 11d. Towage. On a vessel of 153 reg. tons, cargo in and out, 12ft dft., inwards £2.

to 18ft with safety. **Charges.** On vessel of 747 tons, ballast in, cargo out, drawing 10ft in and 18ft 9in out £351 15s 3d. Commission on freight 2%. **Pilotage.** Varies according to dft. of water and distance. Minimum 6ft dft., U.S. vessels £1 13s 9d; 6ft dft., foreign vessels £2 10s 7d. Maximum, 20ft dft., U.S. vessels £20 17s 10d; 20ft dft., foreign vessels £31 6s 6d. **Towage.** On a vessel of 747 reg. tons, ballast in and cargo out, dft. 10ft in and 18ft 9in out, to sea, by agreement £37.

DENIA, Spain. Lat. 38° 50' 40" N; long. 0° 7' E. Pop. 10,000. Tr.—I. Timber, fuel, wheat, and flour; E. Raisins, almonds, oranges, &c. Accn. Vessels not drawing over 12ft when loaded can load inside the port. **Pilotage.** £1 13s 4d in and out. Mooring and unmooring inside the port from £1 0s 10d for vessels not exceeding 60 tons to £3 6s 8d progressively for 500 reg. tons.

DIEPPE, France. Lat. 49° 50' N; long. 1° 5' E. Pop. About 21,000. THW. 11h 6m; Sp. rise 27ft; N. rise 20½ft. Tr.—I. Coal, iron, pitch, cement, machinery, and general goods; E. Silks, manufactures, wines, brandy, fruit, potatoes, fancy goods, &c. Accn. Tidal harb. and three floating basins. The basins will take vessels of 22ft ST., and 16ft at NT. The harb. will admit vessels of about 22ft at HWOST., and of about 16ft at NT. A gridiron 165ft long. Cranes to lift 5 tons; 1 of 30 tons. **Charges.** On a vessel of 500 tons about £34. **Pilotage.** On vessel of 500 reg. tons, inwards and boat to help in £3 2s 9d; outwards and ditto £1 5s. **Towage.** On vessel of 247 reg. tons, inwards £2 9s; outwards £1 9s 3d. Eng. Brokers. D. Gens, C. Delarue, A. Saller, J. Teste.

DIGDEGUASH, N.B. Lat. 49° 9' N; long. 67° W. Accn. There are two passages leading to harb., the W. with 30ft at LW., and the E. with about 22ft. Anchorage safe. **Charges.** Port charges and loading expenses about 7/3½ per standard on vessels loading deals. Hospital dues 1d per ton. Harb. master 8/4 to 20/10. **Pilotage.** Summer rate 8/4 per foot in, and 6/3 out; winter rate 10/5.

DRAGOMESTRE, Greece. Lat. 38° 33' N; long. 21° 6' E. Pop. About 9,000. Tr.—E. Wood, &c. Accn. Deep water close to the shore. **Charges.** Dues and charges on a vessel of 99 tons about £5 10s. **Pilotage.** See Patras.

DRAMMEN, Norway. Lat. 59° 45' N; long. 10° 12' E. Pop. About 30,000. Tr.—E. Timber of all kinds (rough and sawn), iron, and wood pulp. Accn. Vessels drawing up to 20ft can enter the port. Three small cranes.

DRANGSOUND.—See Wiborg.

DRONTHEIM, Norway. (On south bank of the Nid.) Lat. 63° 24' 27" N; long. 10° 27' 30" E. Pop. 24,000. Tr.—I. Salt, coal, spirits, grain, staves and colonial produce; E. Timber, pyrites, copper ore, chromium, and fish. Accn. Large and good quays for discharging, &c. Depth of water 14ft LT. A graving dock, 256ft in length, and four patent slips. Shears to lift 35 tons. **Charges.** Harb. dues 2/2 to 8/8. Harb. master's fee 2/2 to 4/4. Light dues 3½d ton, and tonnage dues 7½d ton (loaded). **Pilotage.** According to a tariff regulated to dft. of water, combined with the vessel's tonnage, and according to the distance from the shore where the pilot is taken on board. From the roads into the harb. from 4/4 to 8/8, out the same. On schooners

Charges. On vessels of 100 tons drawing 11ft, about £12 5s. **Pilotage.** According to dft, minimum, 17 decimetres 17/8; maximum, 52 des. £7 12s. 7d. **Towage** about 2d. per ton.

ESQUIMAULT, Brit. Col. Lat. 48° 25' 49" N; long. 123° 26' 45" W. **Accn.** The usual anchorage is on the E. side of the harb. in 6 fms. It is a magnificent harb., of easy access, situated on the SE. portion of Vancouver Island. **Charges.** Tonnage dues 2d ton in or out. Stevedore's charges 7/6 load. Shipping master's fees. Dues and charges on a ship of 500 reg. tons £8 6s 8d. Commission on disbursements 5%. **Pilotage.** £1 9s 2d foot. **Towage.** A vessel of 1,000 tons up and down about £83 6s 8d.

EUGUA QUAOU.—See Santos.

EUPATORIA, Russia. Lat. 45° 12' N; long. 33° 23' E. **Pop.** 13,416. **Accn.** Good anchorage in 5 fms. Vessels drawing 18ft anchor quarter of a mile from town. **Charges.** On vessel of 296 tons, £16 12s 6d.

FAABORG, Denmark. (S. Coast of I. of Funen.) Lat. 55° 5' N; long. 10° 16' E. **Tr.**—E. **Provisions.** **Accn.** Vessels of 12ft dft. can enter the harb. **Charges.** Harb. dues about 3½d ton, in or out. Custom-house charges same as Svendborg.

FECAMP, France. Lat. 49° 45' N; long. 0° 22' E. **Pop.** About 14,000. **Tr.**—I. Principally coal, timber, bark, fish, &c. **Accn.** A tidal harb. and dock suitable for vessels of 800 tons reg. drawing 16 to 18ft. The entrance is 220ft wide. Sp. rise 31ft; N. rise 21ft. Repairs and refitting are carried on. Three steam cranes. **Charges.** Dues on a brig of 165 tons of 12½ft dft. about £15. **Pilotage.** On brig of 165 reg. tons drawing 12½ft, with cargo of deals inwards and ballast outwards: inwards £1 10; outwards 15/. **Towage.** On brig of 165 reg. tons drawing 12½ft with cargo of deals inwards and ballast out, in £1 12s 6d; out 19/6. **Eng. Brokers.** O. Donovan, Renault, Racoir.

FERMO, Italy. Lat. 43° 11' N; long. 14° 15' E. **Pop.** 18,726. **Accn.** Vessels anchor off village in 15 to 24ft. **Charges.** Port dues, 8d per ton.

FERROL, Spain. (Bay of Corunna.) Lat. 43° 27' 45" N; long. 8° 16' 8" W. **Pop.** 22,000. **Tr.**—The custom-house is open for every kind of I. except dry goods; E. Pit-props, refined petroleum, and old iron. **Accn.** It is one of the finest harb. in Spain, and is the chief naval station. There is a graving dock 475ft long, another for vessels up to 350 tons, and a patent slip for large vessels. **Charges.** On a vessel of 250 tons coal in, ballast out £55. Best Cardiff coals 25/ per ton. **Charges** for a vessel putting in for coal, about £8. **Pilotage.** Port pilotage inwards £1 13s 6d; outwards, two masts 16/9; more than two masts £1 0s 10d. The pilot of the port never goes further out than Cape Priorino. If a vessel takes a fisherman outside to pilot her to the entrance, the fees are paid according to the distance, from 8/4 to £1 5s over and above the port pilotage, which is compulsory. Every change of position in the harb., with or without the assistance of a pilot, 12/6. Vessels putting in through bad weather or in distress, only pay pilotage. **Towage.** There are no private tugboats, but the dockyard tug, if asked, and not otherwise busy, charges about £6 5s to tow a ship out.

of 500 tons with coals from England £28 4s 10d. Pilotage. Inwards :—1st, ordinary pilotage (£1 0s 9d 100 reg. tons) within 20 miles of Cape La Heve; 2nd one-third more beyond 20 miles and within 40 miles; 3rd, one-half more beyond 40 miles; 4th, one-half of ordinary pilotage from the small roads; and 5th, one-third of same inside the north pier. In ballast one-half of ordinary rates. Windbound vessels, either in ballast or loaded, one-half of ordinary rates. Steamers are always considered as loaded vessels, but they pay only one-half of the rates stipulated for sailing vessels of same reg. tonnage. Vessels under 80 tons are exempt from pilotage unless they ask for a pilot. Outwards :—1st, one-half of the inward pilotage, if the vessel is fully or partly loaded; and 2nd, one-third of same if she is in ballast or wind-bound. Should the pilots be required to go as far as the outlying banks, they receive an additional sum of 2/4 $\frac{1}{2}$, and should they consent to take vessels further, their fees are to be fixed by mutual agreement. An allowance of 1 $\frac{1}{2}$ per cent. is charged upon all pilotage rates, in behalf of the head pilot. Eng. Brokers. E. Billard, A. Farcis, V. Franque, M. Taconet. F. Bernal, Eng. Consul-General.

HELSINGBORG, Sweden. (On the Sound.) Lat. 56° 4' N; long. 12° 49' E. Pop. 16,500. Tr.—I. Colonial produce, iron, coals, manures, &c.; E. Oats, barley, wheat, oxen, pigs, sheep, butter, cheese, meat, and timber. Accn. Excellent harb. with 19ft of water, containing dry dock (276 × 44 × 16), shipbuilding yard, &c. Cranes to lift 9 to 10 tons. Charges. On steamer of 500 reg. tons, cargo in and out, £35, which does not include stevedore's fee. Pilotage. On a brig of 129 reg. tons, 11ft dft., cargo in and out £1 4s 5 $\frac{1}{2}$ d; on a vessel of 200 reg. tons, with cargo in and out, in, about £1 7s 1 $\frac{1}{2}$ d.

HELSINGFORS, Russia. (Finland.) Lat. 60° 9' 42" N; long. 24° 57' 47" E. Pop. 33,000. Tr.—I. Salt, colonial produce, &c.; E. Corn, fish, logs, deals, &c. Accn. The largest ships can enter the harb. Vessels drawing 14ft lie alongside quays. Repairing yards. Small cranes. Pilotage. Grahara to the roads and *vice versa* (summer), from £1 13s 4d for vessels of 9ft to £3 8s 7d for vessels of 18ft dft. Porkkala to the roads and *vice versa* (summer) from £3 9s 7d for vessels of 9ft to £7 16s 7d for vessels of 18ft dft. Winter rates 25 per cent. higher, commencing September 15 and ending May 15. Towage. Moderate, and boats always obtainable; ships find cables and ropes when being towed.

HEPPENS, Germany. Accn. 7ft at NT., and 10ft at ST. Harb. only suitable for small vessels. A dock is in course of construction, which will be capable of receiving vessels of much larger dft. Pilotage. On vessel of 171 reg. tons, coals in, 13ft dft., out in ballast; in and out of harb. 7/6.

HERNOSAND, Sweden. (Gulf of Bothnia.) Lat. 62° 36' N; long. 17° 20' E. Pop. 5,600. Tr.—I. Colonial produce, salt, brandy, coals, coke, iron, wine, canvas, cordage, &c.; E. Timber, deals, battens, boards, ore, spars, iron, and tar. Accn. Vessels of any size can enter the harb., which is one of the best in North Sweden. Charges. On a vessel 278 tons loading lumber £19 13s 10 $\frac{1}{2}$ d. Pilotage. On a vessel of 425 tons, ballast in and cargo out, 14ft in and 18ft out, in, Herno to

for each succeeding day the pilot is detained on board. For change of moorings in the river the charge is $\frac{5}{4}$ for the first day's work, and $\frac{3}{6}$ for each succeeding day, if any.

LJUSNE, Sweden. Tr.—E. Timber, deals, battens, and iron.

Accn. Harb. has sufficient depth of water for vessels of 700 tons. **Charges.** Port dues on a brig of 150 tons £22 18s 4d. **Pilotage.** On a brig 150 reg. tons, ballast in, cargo of 70 standard deals out, in, 9½ft dft. 15/0½; out, 13ft dft. 21/. **Towage.** On a brig of 150 reg. tons ballast in, cargo of 70 standard deals out, to loading berth 10/7½; to sea 15/11½.

L'ORIENT, France. Lat. 47° 04' N; long. 3° 31' W. Pop.

About 40,055. Tr.—I. Grain, petroleum, shipbuilding materials, coal, iron, and provisions; E. Wheat, wine, brandy, liqueurs, sardines, cloth, iron, lead, silks, wax, &c. Accn. Floating dock for vessels up to 600 tons burthen and 15ft dft. at ST. The largest vessels can discharge in the harbour. Shipbuilding is carried on. There are two graving docks and a heaving-down pontoon for vessels up to 400 tons. Eng. Brokers. Civel, Kerlero du Crano.

LOUVAIN, Belgium. Pop. 37,385. Tr.—E. Potatoes, bark, iron, coals, phosphate, tiles, &c. Accn. Depth 11ft 4in, and breadth of sluices 26ft 2½in; length 173ft. **Charges.** On a vessel of 100 tons £7 10s 10d (coming and going with cargo); on a vessel of 100 tons only once loaded, £6 8s. **Pilotage,** about £1 0s 7d. **Towage,** £2 7s 6d.

LUBECK, Germany. Lat. 53° 52' N; long. 10° 41' E. Pop.

About 31,000. Tr.—I. Wine, silks, cotton, earthenware, pigments, coal, iron, colonial produce, grain, butter, tar, timber; E. Wine, spirits, coffee, sugar, and general merchandise. Accn. Large vessels can enter the port. A floating dry dock for vessels up to 1,500 tons, and two slips for vessels up to 400 tons. **Pilotage.** Sea pilotage from ½d ton, generally by agreement.

LYNGOR, Norway. Lat. 58° 38' N; long. 9° 10' E. Tr.—

E. Ice. Accn. Harb. is small, but port is well sheltered, with a depth of water of 18ft. All kind of supplies can be obtained, and repairs executed at moderate cost. Vessels clear at Rusoer. **Charges.** On a ship of 138 tons, drawing 12ft, about £10 14s. Bridge money about 1½d ton. Broker's fee for clearing about 2½d ton. **Pilotage.** On vessel of 362 reg. tons, ballast in and cargo out, in 10ft £1 4s; out 16ft £1 1s 6d.

MACAO, China. Lat. 22° 12' 45" N; long. 113° 35' E.

Pop. About 66,000. Tr.—I. Manufactured goods, coals, rice, and opium; E. Coolies, tea, raw silk, &c. Accn. 26ft at LW. close to Port San Jago, thence the soundings are 20 and 21ft along the eastern shore to the town. Macao is a Portuguese settlement in China. **Pilotage.** 6 to 9ft dft. £2 12s 1d; 10 to 18ft dft. £5 4s 2d; 19ft dft. £6 5s; 20 to 22ft dft. £8 6s 8d.

MADRAS, India. Lat. 13° 5' 10" N; long. 80° 16' 29" E.

Pop. 458,000. Tr.—I. Cotton, hardware, manufactured metals, glass, books, wines, provisions, railway materials, spirits, apparel, timber, horses, &c.; E. Cotton, sugar, indigo, rice, hides, jaggery, cocoanut oil, oil seeds, pepper, &c. Accn. Ships moor in about 8½ to 9 fms in the roads. **Charges.** Port dues 4½d ton, once in 90 days, if leaving and entering again within that period.

MALAGA, Spain. Lat. $36^{\circ} 43' N$; long. $4^{\circ} 26' W$. Pop. 150,000. Tr.—I. Coal, coke, patent fuel, fire-bricks, fire-clay, cotton raw and manufactured, linen, woollen, and other textile fabrics, yarns, iron, hardware, glass, china, and earthenware, salt, petroleum, fish, dye stuffs, colonial produce, butter, cheese, timber, naval stores, &c.; E. Wine, raisins, grapes, almonds, figs, lemons, oranges, olive oil, brandy, anchovies, aniseed, canary seed, barilla, grass, lead, and minerals, &c. Accn. Vessels of more than 18ft dft. should not attempt to enter harb.; 22ft at the entrance to the port, 26ft inside, and 10ft close to the town. Cranes for loading and unloading lighters. Charges. On a vessel of 893 tons 16ft dft. about £51 12s 6d. Pilotage. Inwards or outwards:—From 16/4 for sailing vessels up to 60 tons, and 14/8 steamers up to 60 tons, to £1 6s 6d for sailing vessels up to 501 tons and upwards, and £1 2s 6d for steamers of 501 tons and upwards. Inward compulsory; outward voluntary. Towage. On a vessel of 893 tons, ballast in and cargo of esparto out, 16ft dft., towage to sea £1 12s 8d.

MALAMOCCO, Italy. Pop. About 132,000. Tr.—E. Silk and silk goods, glasswares, books, and bones. Accn. Malamocco forms entrance to only passage to Venice for vessels of large dft. Vessels of 28ft can enter with safety. Charges. Moderate. Pilotage. From Pirano to Malamocco about £2. Towage. From Malamocco to Venice about £2 1s 8d for vessel of 100 tons. An agreement should be made as there is no fixed tariff.

MALMO, Sweden. Lat. $55^{\circ} 37' N$; long. $13^{\circ} E$. Pop. 46,000. Tr.—I. Coal, colonial produce, manufactured goods, cotton, chemicals, ore, herrings, salted fish, manures, cement, wool, &c.; E. Grain, timber, cattle, brandy, flour, butter, cheese, &c. Accn. Inner harb. formed by moles. The bar and harb. have 19ft of water, and there is a dock 212ft long, where vessels of 17ft dft. can lie alongside the moles. Malmo is situated on the Sound almost opposite Copenhagen. There is a graving dock 200ft long, and a patent slip 400ft long, for vessels up to 1,700 tons, in the port. Charges. Light dues, about 3½d for all classes of vessels; harb. dues 1½d ditto; load money 1½d ditto. Pilotage. For a vessel drawing 10ft 10/10½, 11ft 12/6, 12ft 13/11½, 13ft 15/5, and so on. Towage. From the harb. to the last buoy in the roads, and *vice versa*, by the steamer *Active*, which is only obtainable when not engaged in towing mud lighters:—From 11/8½ for a ship of 64·51 tons to £1 18s 4d for a vessel of 483·84 tons. When steam is not up and special firing is necessary, the charge is increased by 5/3½d. The ship being towed has to provide necessary cables and ropes. Towage for greater distance outside the roads must be separately agreed upon with the harbour-master.

MALTA (VALETTA). Lat. $35^{\circ} 54' N$; long. $14^{\circ} 31' E$. Pop. 31,000. Tr.—I. Cotton, coals, woollens, coffee, clothing, sugar, linens, dried fish, iron, beer and ale, indigo, butter, earthenware, &c.; E. Olive oil, ivory, cotton, silk, grain, and oranges. Accn. Safe and commodious harb., with sufficient water for largest vessels afloat. Ships of any size can lie alongside quays. A dry dock and pontoon capable of lifting vessels of 3,000 tons reg. Charges. Tonnage dues 3d ton. Steamers are exempt from tonnage dues, but pay port dues, whether cargo is discharged or not, £1 each, up to 400 reg. tons, £2 up to 800 tons, and £3 above that tonnage. Discharging 6d to 8d ton. Pilotage. Inwards: 100 tons

burthen 8/0; 101 to 150, 12/; 151 to 250, 16/; 251 to 350, £1; 351 and upwards, £1 5s. Outwards, half above rates. Pilotage of a vessel between the Great and Quarantine harb., two-thirds of above rates. Pilots on board vessels subject to quarantine are entitled, if victualled, to 1/8, if not victualled to 2/8 per day, exclusive of pilotage charges. Towage. Towing lighters from one harb. to the other and back 10/; boat and men 1/6; towing same from shore to steamer or dock and back, in any of the harb. 16/6. These charges are made when there is more than one lighter.

MANILA, Luzon, Philippine Islands. Lat. 14° 36' N; long. 120° 54' E. Pop. About 300,000. Tr.—I. Cotton fabrics, silks, woollens, drugs, clocks, jewellery; E. Sugar, hemp, cordage, tobacco, cigars, indigo, cotton, coffee, rice, leather, dye-woods, rum, wood, mother-of-pearl, tortoiseshell, &c. Accn. Vessels drawing not more than 12ft can load and discharge alongside the quay. There is a patent slip 820ft by 36ft by 26ft. Manila is the capital of the Spanish possessions in the East. Charges. Port and light dues 4d ton. Pilotage. According to agreement, say £1 to £2.

MARACAIBO, Venezuela. Lat. 10° 38' N; long. 71° 42' W. Pop. 20,000. Tr.—E. Coffee, &c. Accn. The harb. is deep enough to contain the largest vessels; but, owing to the bar closing the Gulf of Venezuela, only vessels of a limited dft. can go there. There is a depth of water on the bar from 12 to 14ft, but no vessel should draw more than 12ft. Inside the harb. there are 5 to 7 fms of water close to the town. Charges. Tonnage dues with cargo 2/1 in or out. Light dues 3d ton. Clearance £10 8s 4d in and out. Doctor's visit 12/6. Bill of health 12/6. Pilotage. On a vessel of 230 tons reg., with general cargo in and cargo out of divi-divi and fustic, inwards, £6 10s; to the coast £1 13s 4d. Towage. In, 6½d ton reg.; out, 4/2 ton reg., including pilot.

MARANHAM, Brazil. Lat. 2° 31' S; long. 44° 18' W. Pop. 31,000. Tr.—I. Cotton stuffs, linens, woollens, silks, flour, wines, coal, iron, &c.; E. Cotton, rice, sugar, hides, ginger, ipecacuanha, &c. Accn. The harb. has from 13 to 24ft at LW. The bar has only 13ft at LW. Charges. On a schooner 134 tons cargo, in and out, drawing 11ft, £169 6s 6d. Cotton, pressed bales, one milreis each; unpressed do. 400 reis each. Pilotage. Irrespective of size of vessel or dft. of water £8 16s.

MARSALA, Italy. Lat. 37° 47' N; long. 12° 25' E. Pop. About 30,000. Tr.—I. Chiefly procured from Palermo, principal imports direct, staves, hoop-iron, and coals. Accn. A large and spacious harb. Depth of water varies from 12 to 15ft. Charges. On vessel of 142 tons, for 14 days £13 5s 7d. Pilotage. On a vessel of 142 reg. tons, ballast in and cargo out:—Pilotage in and mooring, or out and unmooring, £1 11s 9d.

MARSEILLES, France. Lat. 43° 17' 49" N; long. 5° 22½' E. Pop. About 360,000. Tr.—I. Oil seeds, raw sugars, cotton, wheat and grain; E. Silk fabrics, wines, brandies and liquors, woollen and other stuffs, madder, oil, soap, colonial produce, and refined sugar. Accn. Five docks. Four spacious docks in the new port, and one floating dock in the old harb. for receiving sailing vessels up to 500 reg. tons. The approximate depth of water in the various docks is: Old port 19ft 8in; Joliette

22ft 11in; Lazaret 27ft; Arene 27ft 10in; Gare Maritime 29ft 6in; Gare Nationale, at the quay side 22ft, and at the mole side 60ft. Good and ample accommodation for vessels, and large warehouses. **Charges.** Ballast according to agreement. Port charges for a vessel of 141 tons £10 10s. Tonnage dues 4½d reg. ton. No port or dock dues. Health dues 1d ton. Demurrage 4½d ton per day. **Pilotage.** First line inwards 3½d reg. ton, second ditto 2½d; outwards 1½d; 2d ton inwards and 1½d outwards. Should the pilot be taken on board 6 miles off the port, the full charge is made; if only 2 miles, one-fourth less; and three-fourths less if he comes on board at the entrance. Cranes to lift 25 to 40 tons. **Towage.** On vessels from ports over the ocean 9½d reg. ton. **Eng. Brokers.** Alexander, E. Allard, M. Audibert, J. Barry, A. Bonnet, E. G. Feisch, W. Carr, F. Gutman, C. Saunier, E. Tholozan.

MARSTRAND, Sweden. Lat. 57° 54' N; long. 11° 35' E. Pop. 1,269. **Tr.**—I. Coal, salt, dry goods, &c.; E. Grain, deals and lumber. **Accn.** Harb. has 25 to 50ft of water inside. **Pilotage.** Free when pilot is not employed, but when employed from April 16 to Sept. 16, in 10 Swedish ft 14s 1½d; 15, £1 4s 11½d; 20, £11 7s 2½d; out, 10 Swedish ft, 11s 11½d; 15, £1 0s 11½d; 20, £1 11s 1½d. About 20 per cent. more from Sept. 16 to April 16.

MARYBOROUGH, Queensland. Lat. 25° 23' S; long. 154° 45' E. Pop. About 10,000. **Tr.**—I. Consists of almost every description of British and foreign manufactured goods, besides wines, spirits, tea, coffee, tobacco, cigars; E. Gold, copper, antimony, timber, wool, tallow, hides, sugar, molasses, rum, &c. **Accn.** Vessels drawing 14ft can reach the town *via* Wide Bar Bay. **Pilotage.** From 6d ton; minimum £3. Foreign-going steamships (not being intercolonial trade vessels) whilst on a foreign voyage, but not carrying cargo coastwise, a remission of customary pilotage dues, except in respect of an amount equal to 1/ ton on all cargo landed and shipped.

MATAMOROS, Mexico. Pop. 13,740. **Tr.**—I. Manufactured goods, wines, oils, &c.; E. Specie, hides, wool, and horses. **Accn.** Average depth on bar 5ft. **Charges.** On a vessel of 124 tons, £67 7s 10d. Tonnage dues 4/3 ton.

MATANZAS, Cuba. Lat. 23° 03' N; long. 81° 37' W. Pop. 40,000. **Tr.**—I. Provisions, petroleum, coal, cooperage, stock, &c.; E. Sugar, molasses, honey, &c. **Accn.** The port is sheltered from all winds, except those from ENE., when a heavy swell comes in. On the bar are 4 to 6 fms of water. Tides rise from 1½ to 2ft. Anchorage, in good holding ground in mud, in from 16 to 24ft. Only 8ft of water being at the wharves, vessels receive their cargoes by means of lighters. **Charges.** Custom House fees £2 10s, tonnage dues 5/7½, health dues £1 15s 5d, Port Warden's charges 17/8, discharging ballast 2/1 per ton, ballast, sand, 4/2, stone 6/3, f.o.b. 8/4 per ton. **Pilotage.** (Compulsory.) In and out 4d ton.

MATARO, Spain. Lat. 41° 32' N; long. 2° 28' E. Pop. 17,405. **Tr.**—I. Coals; E. Red wine and brandy. **Accn.** Good anchorage in 4 fms. **Charges.** On a vessel, about £5.

MAZAGAN, Morocco. Lat. $33^{\circ} 16' N$; long. $8^{\circ} 26' W$. Pop. 11,000. Tr.—E. Maize, beans, peas, and cotton. Accn. Safe anchorage in 6 fms. Charges. On a vessel of 360 tons, £11 3s 4d.

MAZATLAN, Mexico. Lat. $23^{\circ} 12' N$; long. $106^{\circ} 24' W$. Pop. 14,500. Tr.—I. Provisions, machinery, British hardware and crockery, dry goods from France and Germany; E. Silver dollars, Brazil or Lina wood, and copper. Accn. Depth of water 12ft on bar, and 18ft inside; rise of Sp. 15ft to 18ft; N. $3\frac{1}{2}$ ft to 5ft. Mazatlan is an important harb. on W. coast of Mexico. Charges. Tonnage dues $4\frac{1}{2}$ ton loaded, in ballast free, at merchant's expense. Pilotage. $7\frac{1}{3}$ foot, and £1 os 10d for the assistance of a boat.

MAZZARA, Sicily. Pop. 13,500. Tr.—E. Corn, pulse, linseed, wine, fruit, fish, barilla, madder, oil, and soap. Accn. Large vessels anchor in 10 fms. Charges. On a vessel of 193 tons, about £18 7s 6d.

MELBOURNE, Victoria. Lat. $37^{\circ} 49' 5'' S$; long $144^{\circ} 58' 35'' E$. Pop. 192,000. Tr.—I. Manufactured goods of all kinds, machinery, railway materials, petroleum, naval stores, lumber, tobacco, &c.; E. Wool, gold, coal, metals, tallow, grain, preserved meats. Accn. Vessels of 11ft dft. at ordinary tides and frequently those of 16ft dft. can ascend as far as Melbourne. Pilotage. For sailing vessels and steamers under sail, from $2\frac{1}{2}$ d ton, maximum £7; minimum £1 10s. For steamers and vessels towed by steam $1\frac{1}{2}$ d ton, maximum £5; minimum £1 10s according to distance. Outports as follows: Port Albert—sailing vessels 3d ton, maximum £24, minimum £3; steamers $2\frac{1}{2}$ d ton, maximum £16, minimum £2 10s. Portland Bay—sailing vessels, $2\frac{1}{2}$ d ton, maximum £16, minimum £2; steamers $1\frac{1}{2}$ d ton, maximum £11, minimum £1 10s. Vessels forced back after pilotage to sea $\frac{1}{2}$ above rates. Cranes to lift 1 to 50 tons. Towage. River towage: All vessels, except steamers, 200 tons and under 1/ ton up, 6d down; above 200 tons, for first 200, 1/ ton up, 6d down; for every ton above 200, 8d ton up, 4d down; steamers, 200 tons net and under £7 7s each way; over 200 tons net, for every 100 tons or part of 100 (extra) £1 1s each way; attendance on steamers, steaming up and down between bay and junction, wharf and junction, or *vice versa*, half full rates; all vessels, except steamers, light for docking purposes, from wharf to SW. river or Williams-town docks or slips, or from bay to SW. river, or river docks or slips, half full rates; extra rate for docking in SW. river or road, down 2d ton. Bay towage: Coasters, 200 tons and under £1 11s 6d, over 200, 2d ton each shift; foreign vessels, 500 tons and under £4 4s, over 500 and under 1,200, 2d ton each shift, over 1,200, per agreement; steamers, 200 tons net and under £3 3s, above 200 (for every 100 or part of 100) 10/6 extra; lighters £1 10s each shift. Heads and Geelong: Foreign vessels, 400 tons and under, £20, above 400 tons, for the first 400, £20, for every additional ton to 2,000, 6d, over 2,000, per agreement. Upon all foreign vessels cleared out with sand or stone ballast only, a reduction of one-fifth on the full rates is made. Towage to Geelong same as to Heads; from Geelong to Heads ditto, with £2 10s extra when proceeding to Geelong Light. All these rates are for fair weather; are exclusive of the use of hawser; for sailing vessels are on the gross reg. tonnage; and for steamers on the net

properly secured and moored, the following rates, viz. :— $6/3$ for vessels not ex. 100 tons ; $8/4$ for vessels 100 tons and not ex. 200 ; $12/6$ for vessels over 200 and not ex. 300 ; and $16/8$ for all vessels over 300. And where the distance of removal ex. 4 miles, 50 % additional is allowed on the above rates, and after the 1st Nov. in each year any pilot taking out any ship or vessel is entitled to demand and receive the sum of $16/8$ in addition to the above rates, provided that such pilot shall have taken such ship or vessel clear to sea, leave her without causing any unnecessary delay, and without the ship or vessel having to land such pilot. **Towage.** From the Horseshoe, and between that and Robicheau Buoy to Chatham from £5 12s 8d for under 300 tons to £19 11s 4d for 1,000 to 1,200 tons ; between Robicheau Buoy and Napau Bay to Chatham from £4 15s 10d for under 300 to £16 13s 4d for 1,000 to 1,200 tons ; between Napau Bay and Chatham £3 15s to £13 2s 6d respectively ; from Chatham, outside the bar, £7 10s to £22 18s 4d respectively ; Black Brook to Douglass town $1\frac{1}{2}$ d ton ; from Black Brook to Newcastle or Nelson 2d ton ; from Middle Island to Douglass town 1d, to Newcastle or Nelson $1\frac{1}{2}$ d ton.

MOBILE, U.S. Lat. $30^{\circ} 13' 48''$ N ; long. $88^{\circ} 0' 25''$ W. Pop.

About 45,000. Tr.—I. Salt, coffee, &c. ; E. Cotton, timber, naval stores, &c. Accn. Vessels of 20ft dft. can always cross the bar ; those of $16\frac{1}{2}$ ft dft. can reach the wharves at the city. **Pilotage.** Lower bar, in and out, 4 to 10ft dft. $10/6\frac{1}{2}$; 10 to 12ft dft. $11/3\frac{1}{2}$; 12 to 14ft dft. $12/8\frac{1}{2}$; 14 to 20ft dft. 19/ foot. Upper bar, in and out, by way of Choctaw Pass, $7/3\frac{1}{2}$ foot. Pilotage not compulsory. If spoken by pilots on arriving and departure, and not wanted, only half pilotage is collected ; if not spoken, there is nothing to pay. **Towage.** £2 2s $3\frac{1}{2}$ d to £10 11s $5\frac{1}{2}$ d, as per dft., and contract ; on loaded ships to sea 4d to 5d ton.

MOGODAR, Morocco. Lat. $31^{\circ} 50'$ N ; long. $9^{\circ} 20'$ W.

Pop. 20,000. Tr.—I. Woollen and cotton stuffs, tea, hardware, mirrors, linens, tin, iron, copper, steel, earthenware, glass, sugar, pepper, provisions, beer, &c. ; E. Wool, guns, hides, goat skins, feathers, gold dust, esparto, almonds, beeswax, ivory, olive oil, dates, maize, beans, peas, &c. Accn. Anchorage about a cable-length off in 10 to 13ft, which is sheltered by the island. Large vessels anchor outside. **Charges.** Anchorage.—Under 50 tons, 4/ ; 50 to 100, 8/ ; 100 to 150, 12/ ; over 150, 14/. **Pilotage.** Ships regularly visiting the port and knowing the anchorage pay no pilotage ; strangers pay. Sailing vessels, any tonnage, in and out, pay 35/, or half that amount for entrance only ; steamers about £2 10s each way ; stevedore 2/6.

MOMBAZA, Zanzibar. Lat. $4^{\circ} 04' 00''$ S ; long. $39^{\circ} 43' 9''$ E.

Pop. About 3,000. Tr.—I. Glasswares, cotton goods, copper, iron, &c. ; E. Ivory, horns, skins, wax, gum, copal, &c. Accn. The port has sufficient water for vessels of 30ft dft. The Sp. rise about 11ft. Has an inlet about two cables wide.

MONTE VIDEO, Uruguay. Lat. $34^{\circ} 53' 15''$ S ; long. $56^{\circ} 14' 15''$ W. Pop. 110,000. Tr.—I. Cotton

and woollen fabrics, hardwares, boots and shoes, wine, tin, rice, salt, beer and ale, coals, silks ; E. Wool, hides, sheepskins, tallow, grease, horsehair, beef, extract of beef, bones and bone ash, horns, wheat, &c. Accn. The harb. has a depth of 9 to 14ft ; mud bottom. The anchorage for large vessels is about 2 miles S. of San José

MORLAIX, France. Lat. $48^{\circ} 38' N$; long. $3^{\circ} 47' W$. Pop. About 13,000. Tr.—I. Coal, clay, earthenware; E. Barley, pork, butter, &c. Accn. A floating dock. At HW. the depth of the entrance of the dock is about 15ft. The dock is about 10 miles up the Morlaix river. There is a graving beach 164ft in length. Cranes to lift 1 to 2 tons. Charges. On a vessel of 85 reg. tons, ballast in, cargo out, drawing 10ft loaded, about £5. Broker's charge on inward cargo 3 per cent. on amount of freight. Pilotage. From sea to Morlaix 4d ton. On vessel of 85 reg. tons, ballast in, cargo out, drawing 10ft, loaded, in £1 1s 8d, out £1 8s 6d. Eng. Brokers. B. Bastide, J. Le Despensier.

MOSS, Norway. Lat. $59^{\circ} 27' N$; long. $10^{\circ} 40' E$. Pop. 7,000. Tr. (Only exports).—E. Wood and salt. Charges. On vessel of 138 reg. tons, drawing 12ft, about £10 15s. Pilotage. On vessel of 138 reg. tons, ballast in and cargo out, 12ft dft., loaded, in to Verlebugt (summer) £2 5s 6d; out (summer, 15/6. Crane to lift 10 tons.

MOULMEIN, India. Lat. $16^{\circ} 3' 0'' N$; long. $97^{\circ} 42' E$. Pop. about 60,000. Tr.—I. Cotton goods, marine stores, and cocoanuts; E. Teak, rice, shellac, betelnut, ivory, sapan wood. Accn. There is no want of water in channels; ships drawing 23ft can enter during ST. at any time of year. A dry dock and patent slip. Charges. The disbursements of a vessel of 500 tons about £250. Vessels supply themselves with water from the river. Pilotage.—

Dft of water.	Full.	1-5th.	2-5ths.	3-5ths.	4-5ths.
Minimum, below and up to 8ft.	50/	10/	20/	30/	40/
Maximum, 25 to 26ft	£66	£13 4s	£26 8s	£39 12s	£52 16s

Intermediate portions of a foot to be regulated as follows: 3in and under no addition; between 3 and 9in the medium between the two rates; above 9in the dft. of the next foot to be taken. Vessels taking steam aid to be charged 2-3rds of the rate for sailing vessels. Steamers under 15ft, half the rate of sailing vessels, above 15ft, 3-5ths of such rate. Vessels not taking licensed pilots, and above 100 tons, will be charged by Government at the rate of 1½d reg. ton. The charge for shifting a berth in the port, or removing a vessel, is 50/. Vessels that call for orders, or put into Amherst in distress, and proceed in and out without a pilot, shall be exempt from pilotage. A pilot may be detained 24 hours after arrival off town without demurrage. The pilotage distance is divided into fifths for charging broken or intermediate pilotage; but the least sum payable to a pilot for taking a vessel in or out of Amherst is £2 10s.; outside Patch Buoy to New Channel 1-5th; New Channel to Fishing Village 1-5th; Fishing Village to Halfway Creek 1-5th; Halfway Creek anchorage to Natmoo anchorage 1-5th; Natmoo anchorage to Moulmein 1-5th. Towage. Under 15ft dft. £30, and £10 extra for every additional foot of dft.

MOZAMBIQUE, Africa. Lat. $15^{\circ} 4' S$; long. $40^{\circ} 44' E$. Pop. About 7,000. Tr.—I. Cotton goods, beads, brass and copper wire, bar-iron, dry goods of every description, guns, powder and lead, hardware, wines, spirits, beer, preserved meats, fruits, vegetables, French tiles and bricks, cattle from Madagascar; E. Ivory, indiarubber, oil seeds, cowries, columba root, and gum copal. Accn. Vessels drawing 25ft may enter the harb., but the space is limited. Charges. Tonnage dues about 9d ton, health officer, &c. Pilotage. About 2d ton.

MUSCAT, Arabia. Lat. $23^{\circ} 27\frac{1}{2}'$ N ; long. $58^{\circ} 35\frac{1}{2}'$ E. Pop. 40,000. Tr.—I. Almonds, aloes, rice, sugar, coals, gum ammoniac, nitre, gum copal, assafoetida, frankincense, ivory, horns, hides, wax, British and Indian cotton goods, shawls, and china manufactures—most of these are re-exported to India and the East ; E. Dates, wheat, hides, asses, horses, salt, coffee, pearls, raisins, sulphur, and drugs. Accn. Anchorage in 3 to 5 fms about 2 cable lengths from the landing pier. There is a cove which is well sheltered and has deep water in which vessels can moor. Charges. Moderate. Pilotage. On an American ship of 1,140 tons coming to Muscat with a cargo of coals and leaving in ballast, inward, 21/.

MUSQUASH, N.B. Lat. $45^{\circ} 9'$ N ; long. $66^{\circ} 15'$ W. Tr.—E. Deals. Accn. Entrance about a mile wide. Vessels of 20ft dft. can go in and out, and lie afloat loading in berth at all times. Charges. By agreement. Pilotage. (Compulsory.) In 7/3, out 4/2.

NAGASAKI, Japan. Lat. $32^{\circ} 44'$ N ; long. $129^{\circ} 48'$ E. Pop. 100,000. Tr.—I. Manufactured goods, iron, sandal wood, lead, and various articles of merchandise, except munition of war, which can only be sold to the Japanese Government and to foreigners ; E. Tea, grapes, sulphur, isinglass, paper, coal, vegetables, wax, gall nuts, copper, dried fish, sea slugs, seaweed, peas, beans, camphor, crockery, planks, rape seed, tobacco, and rice. Accn. The port is large and commodious, and available for ships of all classes. A graving dock, $374 \times 77 \times 25$ ft, for vessels up to 1,200 tons, and a patent slip for vessels of 1,000 tons. Shears to lift 45 tons. Pilotage. Inwards 12/6 foot, outwards 6/3. Towage. No tow-boats, but small boats (sampans) perform this service in moderate weather. The cost of 40 sampans, sufficient to tow a 1,000-ton ship, is £2 10s to £3 2s 6d.

NAKSKOV, Denmark. Tr.—I. Manufactured goods, coal, iron, wine, timber, colonial produce, salt, manures, feeding stuffs ; E. Grain, especially wheat and barley, flour, butter, eggs, cheese, wool, hides, cattle, sheep, and pigs. Accn. 14ft in the fairway of the fiord leading up to the harb., and 14ft inside (Danish). Naskov is on the W. coast of the Isle of Lolland. Charges. Government dues uniform for all Danish ports, about 6d per reg. ton. Harb. dues about 1½d per reg. ton in ballast or loaded. Pilotage. From sea to harb. or *vice versa* :—From April 1 to Sept. 30, 1/2½ foot ; from Oct. 1 to March 31, 1/7½ foot ; from Albu to the harb. and *vice versa*, from April 1 to Sept. 30, 11d ; from Oct. 1 to March 31, 1/2½ foot. Pilot's travelling expenses back, 8d Danish mile.

NAMSOS, Norway. Lat. $64^{\circ} 30'$ N ; long. $11^{\circ} 30'$ E. Tr.—I. Coal, salt, and grain ; E. Deals, battens, boards, mining timber, and herrings. Accn. Depth of water varies from 10 to 30 fms ; good anchorage close to the town. Vessels can easily be repaired. Charges. About 5d reg. ton. Light dues, 5d per ton, when loaded ; no dues in ballast. Coals about £1 per ton. Provisions are cheap. Pilotage. The distance from Namsos to the sea is about 28 miles. Pilots can always be had at Villa-Oe Lighthouse. Inwards (summer) 3d reg. ton, outwards 2½d ; inwards (winter) 4d, outwards 3d. Towage. A steamtug can be obtained.

NANAIMO, British Columbia. Lat. $49^{\circ} 10' N$; long. $123^{\circ} 56' W$. Tr.—E. Coal, lumber, furs, skins, salmon; I. Beef and mutton, cereals, manufactured goods. Accn. Every convenience for loading coal; a ship of 1,000 tons can be loaded in a week. Charges. Vessels under 200 tons $6/3$, under 300 tons $8/4$, under 400 tons $10/6$, under 700 tons $16/8$, over 700 tons $21/$. Towage from Nanaimo to Royal Roads: minimum, 500 tons $\pounds 17$ 18s 4d; maximum, 1,200 tons $\pounds 125$. Wellington Collieries 3 miles N. of Nanaimo.

NANKIN, China. Lat. $32^{\circ} 02' N$; long. $118^{\circ} 24' E$. Pop. About 500,000. Accn. Vessels drawing 20ft can ascend as far as this port. Nankin is 235 miles from the sea.

NANTES, France. Lat. $47^{\circ} 14' N$; long. $1^{\circ} 30' W$. Pop. 122,000. Tr.—I. Coal, pig-iron, sugar, coffee, cotton, indigo, timber, hemp, cord, oil, pitch, guano, &c.; E. Brandy, potatoes, buckwheat, sardines in oil, flour, refined sugar, salt, wheat, charcoal, pit-props, &c. Accn. Vessels drawing 14ft 10in can proceed to the quay. Those above 16ft dft. should not attempt to ascend to Nantes. A floating dry dock 158ft long, and pontoons for large vessels. Charges. Port charges for steamer of 324 tons about $\pounds 44$. Pilotage. On vessel of 144 reg. tons; inwards, with a cargo of 243 tons coals from Sunderland, outwards in ballast, in, 12ft dft., out 7ft; sea to Paimbœuf $\pounds 5$ 10s; Paimbœuf to Nantes $\pounds 1$ 18s; Nantes to Paimbœuf $\pounds 1$ 14s; Paimbœuf to Four $\pounds 1$ 2s 4d. When vessels are towed up, one-fourth less is charged. Towage. If required, $9\frac{1}{2}$ d ton inwards. Eng. Brokers. De Gonfreville, L. E. Joubert, R. Le Houelleur, A. M. Maillard, A. Manjot, A. M. Moyau, P. Segueineau.

NAPLES, Italy. Lat. $40^{\circ} 50' 19'' N$; long. $14^{\circ} 15' 36'' E$. Pop. About 508,000. Tr.—I. Manufactured goods, colonial produce, petroleum, coal, iron, machinery, cotton yarns; E. Gloves, soap, perfumery, silks, artificial flowers, corals, earthenware, hats, olive oil, wool, wine, brandy, green fruit, and dry fruits. Accn. 3 to 4 fms inside harb., which is protected by a double mole. A graving slip $247\frac{1}{2} \times 63$ ft, with 27ft on sill at ST. and 19ft at NT. Charges. Tonnage dues $5\frac{1}{2}$ d. Sanitary dues $4\frac{1}{2}$ ton. Pilotage. From 7/11 for vessels up to 100 tons to $\pounds 1$ 3s 9d for vessels of 251 to 300 tons, and $2/4\frac{1}{2}$ additional for every 50 tons. Towage. By agreement.

NASSAU, New Providence, Bahamas. Lat. $25^{\circ} 5' 37'' N$; long. $77^{\circ} 22' 22'' W$. Pop. About 7,000. Tr.—I. Powder, &c.; E. Sponges, cottons, pimento, fruits, and salt. Accn. Vessels of 15ft dft. can enter at HWST., although the depth is 17ft, but the bar is rocky and only safe for that dft. Charges. A vessel of 151 reg. tons, drawing 11 $\frac{1}{2}$ ft, in and out, total cost $\pounds 17$ 2s 9d. Pilotage. From 12/6 for 6ft and under, to $\pounds 5$ 10s for 18ft, and 5/ in addition for every half foot above 18ft, and an additional fee of $\pounds 2$ on steamers. Vessels under 30 tons exempted, unless the masters voluntarily accept the services of pilot. A moiety payable when vessels are anchored outside the bar of N. harb. No extra pilotage allowed for centreboards of vessels. Towage. A vessel of 941 reg. tons $\pounds 19$ 5s. in and out.

NATAL, Africa. (See Port Natal.)

NATAL, Brazil. Lat. $5^{\circ} 45' S$; long. $35^{\circ} 14' 50'' W$. Pop. 11,000. Tr.—I. Railroad ties and railroad machinery; E. Cotton, sugar, dyewoods, and other Brazilian produce. Accn.

14ft on the bar at LT. Sp. rise 8 to 10ft. From the entrance to the town $4\frac{1}{2}$ to $5\frac{1}{2}$ fms. Charges. Dues and charges on a barque 371 reg. tons drawing 13ft 2in, £72 9s 11d. Pilotage. On a barque of 371 reg. tons; ballast in and cargo out, 13ft 2in dft. loaded: up and down to Natal £10 8s 4d, Guarapes and back £8 6s 8d.

NEDER CALIX, Sweden. Lat. $65^{\circ} 50' N$; long. $23^{\circ} 10' E$. Tr.—E. deals, &c. Accn. Vessels of 18ft dft. can ascend as far as the town. Charges. On a vessel of 450 tons ballast inward, deals out, £50 9s 8d. Pilotage. On a vessel of 303½ reg. tons, ballast in and cargo out, in, from Maloren 12ft, £1 1s 1½d; out, 17ft, £2 1s 3d.

NELSON, New Zealand. Lat. $41^{\circ} 15' 35'' S$; long. $173^{\circ} 16' 58'' E$. Pop. 7,500. Tr.—I. General merchandise; E. Wool, gold, flax, hops, grain. Accn. Vessels of 18ft to 20ft dft. can enter at HWST. Charges. On a barque of 500 reg. tons cargo in and ballast out, £41 16s. Pilotage. Steamers not ex. 150 tons 4d; from 150 to 250 tons 4d on 150 tons, and 2½d ton on excess over 150 tons in or out; from 250 to 400 tons 3½d on 250 tons and 2d ton on excess over 250 tons in or out; ex. 400 tons 3d on 400 tons and 1½d ton on excess over 400 tons in or out. After annual pilotage, steamers under 240 tons, £1 each way, 240 tons and upwards 1d ton in and out; sailing vessels from 50 to 250 tons 4d, 250 to 400 tons 5d, ex. 400 tons 6d ton; vessels towed into and out of harb. by steamer are entitled to a reduction of one half the above rates. For removing any steamer or sailing vessel within the harb., from 50 to 250 tons 1d, and from 250 tons and upwards ½d ton. Towage. On a barque of 502 reg. tons, cargo in and ballast out £16 13s.

NEUHAUS, Germany. Pop. About 2,000. Tr.—I. Coals, wood, &c.; E. Cement, bricks, tiles, &c. Accn. Vessels of 10ft dft. can enter the harb., and those of 15ft dft. can load in the river Oste. Charges. River dues on a vessel of 50 tons 4/. Harb. dues the same. Pilotage. 2/ per ft.

NEW BEDFORD, U.S. Lat. $41^{\circ} 38' 6'' N$; long. $70^{\circ} 54' 31'' W$. Pop. About 27,000. Tr.—I. General merchandise, coal, and staves; E. Oils, fish, whalebone, &c. Accn. Vessels of 16ft dft. can enter the inner harb. or pool at LW. Charges. Whatfage dues 10d 100 tons per day. Pilotage. $9/4\frac{1}{2}$ foot, inwards and outwards. Towage. As per agreement.

NEW ORLEANS, U.S. Lat. $29^{\circ} 57' 45'' N$; long. $90^{\circ} 9' W$. Pop. About 250,000. Tr.—I. Manufactured goods, salt, iron, wines, coffee, fruit, and coal; E. Cotton, tobacco, flour, grain, corn, pork, &c. Accn. The S. Pass has 26 to 30ft; the S.W. Pass has now only 13ft. The construction of the jetties at the S. Pass enables vessels to load up to 26ft. Since the jetties were made the other Passes have gradually filled up, and are not now used, except for very small vessels. Charges. Harb. master's dues, £4 each vessel, steam or sail. Pilotage. Bar, over 10ft dft. 19/ foot each way; river, from inside the bar to the city, and *vice versa*, £8 9s 2d, up and down. Ships of war and steamships are the only vessels requiring the services of river pilots. Towage. From bar to city, and city to bar $3/3\frac{1}{2}$ ton.

NEW WESTMINSTER, Brit. Col. Lat. $49^{\circ} 13' N$; long. $122^{\circ} 53' W$. Tr. I.—General merchandise; E. Lumber, fish, canned and salted salmon, ships' spars of the finest quality, and minerals. Accn. The town, which is 15

miles from the bar of the river, can be reached by vessels of 18ft dft. **Pilotage.** Pilotage compulsory. No rates given. **Towage.** From Royal roads and return for a vessel of 700 tons about £62 10s.

NEW YORK, U.S. Lat. 40° 42' N; long. 74° 8' W. Pop. About 2,500,000. **Accn.** There are 70 piers for shipping on the W. and 90 on the E. side of the city. Vessels drawing 23ft can lie at some piers at HW. **Charges.** No light dues are payable by British vessels. Wharf dues 1d ton per day up to 200 tons, 1/4 per 100 tons above 200. **Pilotage.** Via Sandy Hook, from April 1 to Nov. 1. Minimum, inwards, 6ft dft. 15/9½; outwards, 6ft dft. 11/6½ foot; off shore £1 3s 5½d. Maximum, inwards, 25ft dft. £1 7s 5½d; outwards £1 0s 2½d foot; off shore £8 11s 9d. From Nov. 1 to April 1, 16/11 additional. Detention 12/8½ day. For taking vessels from upper to lower quarantine, for vessels having had death or sickness on board, double outward rates; for vessels from sickly ports, but having had no sickness on board, single outward rates; for vessels from new quarantine to New York, half inward rates; vessels from lower to upper quarantine, quarter rates; vessels from upper quarantine to New York, quarter rates. **Towage.** Transporting ship not ex. 200 tons £2 2s 3½d, 400 tons £3 3s 5½d, 600 tons £3 11s 10½d, 800 tons £4 4s 7d, 1,000 tons and upwards £3 3s 5½d to £4 4s 7d; North to East river, and *vice versa* £1 1s 1½d. Hauling to and from wharf 12/8½.

NEWCASTLE, New South Wales. Lat. 32° 55' 15" S; long. 151° 49' 15" E. Pop. 65,000. **Tr.—I.** Manufactured goods, hardware, glass and earthenware, &c.; E. Coal, coke, wool, copper, tallow, hides, and country produce. **Accn.** Vessels drawing 22ft can safely enter; 21ft on the bar; tide rises 2½ft N. and 5ft Sp. Cranes to lift 15 to 25 tons. **Charges.** Harb. light rate 4d reg. ton half-yearly. Dues and charges on a vessel 1,300 tons reg., ballast in and coal out, about £247. **Pilotage.** From and to sea 4d reg. ton. Vessels under 300 tons whose masters do not hold an exemption certificate have to pay £2 10s pilotage each way, whether having the services of a pilot or not. **Removals:**—from 20/ for vessels under 300 reg. tons to 50/ for vessels of 1,000 tons, and 60/ for those exceeding 1,000 tons. **Towage.** From sea 8d per reg. ton. **Removals as follows:**—From 20/ for vessels of 200 reg. tons to 60/ for vessels of 701 tons and over, with 10/ for each intermediate 200 tons; steamers up to 500 and under 600 reg. tons 70/, over 600 and under 1,000, 80/, over 1,000, 100/ per removal.

NEWCHWANG, China. Lat. (entrance buoy) 40° 35' 26" N; long. 121° 58' 24" E. Pop. 60,000. **Tr.—I.** Opium, sugar, and cotton; E. Beans, bean oil, bean cake, castor oil, brown silk, hemp, tobacco, jute, felt, indigo, furs, hides. **Accn.** Least depth on the bar at LWST. 7½ft; Sp. rise 11ft or 12ft, and N. rise 7ft or 8ft. The anchorage is opposite the town, about 800yds wide, with great depth of water. **Charges.** No local; tonnage dues same as Canton. **Pilotage.** £1 foot.

NEWHAVEN, U.S. Lat. 41° 14' 52" N; long. 72° 54' 35" W. Pop. About 70,000. **Tr.—I.** Rags, paper, crockery, rails, iron, coal, &c.; E. Mules, hoops, staves, ammunitions of war, &c. **Accn.** Vessels of 18ft dft. can discharge alongside the wharves. **Charges.** Health dues £1 0s. 10d. **Pilotage.** On foreign vessels at the rate of 3/3½ foot; from 9 to 12ft, 4/2½

master of a vessel coming from sea is compelled to take a pilot after arriving within the line at which Cape Henry bears W. of S., &c. **Towage.** Hampton Roads to Norfolk, or *vice versa*, 350 tons £4 4s 7d, shifting £1 5s 4½d, 1,000 tons £10 11s 5½d, shifting £2 19s 2½d, 2,000 tons £14 16s 0½d, shifting £5 14s 2½d, and other sizes in proportion.

NORRKOPING, Sweden. Pop. About 29,000. Tr.—I.

Coals, soda, cotton, wool, wine, porter, tools, engines, sugar, coffee, tobacco; E. Deals, battens, bar-iron, sails, pig-iron, matches, oats, paper, &c. **Accn.** Vessels of 15ft dft. can anchor near the quay. Good dry dock, wharf, and facilities for executing repairs. **Charges.** Port charges for sailing vessels and steamers 3½d ton. **Pilotage.** For a vessel drawing 15ft entering from sea at Arko Beacon £4 2s, entering at Hafringe Light £4 16s, entering at Haradskar Light £6 4s, and less in proportion for every foot less dft. These rates are from April 16 to Sept. 16. During the winter season the charge is 25 per cent. more. **Towage.** According to arrangement, from £3 to £10.

NYHAMN, Sweden. Lat. 61° 12' N; long. 17° 10' E. **Accn.**

Vessels of 17ft dft. can easily enter harb.

ODESSA, Russia. Lat. 46° 29' N; long. 30° 44' E. **Pop.**

About 280,000. Tr.—I. Coal, iron, machinery, tobacco, manufactured goods, earthenware, tea, coffee, and other colonial goods, &c. (sadly hampered by heavy customs duties and other obnoxious formalities); E. Grain, linseed, wool, tallow, cattle, &c. **Accn.** Best artificial Russian harbour in the Black Sea, the depth of water being up to 24ft. The harbour is formed by several stone piers and a long breakwater, which protects it from northerly gales. Very good anchorage in the inner roads. **Charges.** On a vessel 900 to 1,000 tons ballast in, cargo out (grain) £79 7s 1d. Almost daily communication with Constantinople by mail steamers. 3½ days from London by rail. **Pilotage.** By agreement. On a barque of 364 reg. tons entering in ballast, leaving with cargo of wheat, in and out, 16ft 2in dft. £2 8s 9d.

ONEGA, Russia. Lat. 63° 54' N; long. 38° 8' E. Tr.—I.

Machinery, fish, salt, &c.; E. Deals. **Accn.** At HW. there are 10ft on the bar, and LW. 3ft. **Charges.** Tonnage dues 2d ton. **Pilotage.** In and out 1½d ton. **Towage.** To or from the ballast place £2 8s 9d each way.

OPORTO, Portugal. Lat. 41° 8' 48" N; long. 8° 37' 0" W.

Pop. About 90,000. Tr.—I. Iron, beef, sugar, coffee, rice, hemp, flax, dried fish, coal, codfish, stationery, hardware, cottons, woollens and every description of fancy and manufactured goods, besides colonial produce; E. Wine, oil, shumac, butter, cabinet-work, fruit, wool, cream of tartar, salt, leather, and cork. **Accn.** The depth on bar is uncertain, but it is not safe for any vessel of more than 16ft dft. to cross. **Charges.** On vessel of 107 tons £24 7s. **Pilotage.** Varies, according to the state of tides and weather, say from £7 10s, out and in, to £12 according to tonnage. Steamers are charged much less. When a pilot is detained off the bar he has to be paid 4/ a day. **Towage.** Across the bar, in or out, from £6 15s to £10 2s 6d. From 176½ tons to 220½ tons £11 5s, 220½ to 265 £12 7s 6d, 309½ to 353½ tons £13 10s, 397½ to 442 tons £15 15s, 443 tons £18 and upwards. River service: 88½ to 176½ tons £3 7s 6d, 176½ to 265 tons £4 10s, 309½ and upwards £5 12s 6d.

ORAN. Lat. $35^{\circ} 44' 21''$ N ; long. $0^{\circ} 41' 2''$ W. Pop. 75,000.

Tr.—I. Manufactured goods, wine, butter, and cheese; E. Wheat, barley, cotton, wool, seeds, esparto grass, cattle, hides, tobacco. Accn. Old and new harbs., formed by an inner and outer mole. Least depth in old harb. 18ft, av. depth in new harb. 30ft. Charges on a vessel of 200 reg. tons £8. Pilotage. On British vessel of 200 reg. tons £1 5s. Eng. Brokers. Kuhlmann, Ricca fils, Roux, Sannier.

OSCARSHAMN, Sweden. Lat. $57^{\circ} 16' N$; long. $16^{\circ} 28' E$.

Pop. About 5,800. Tr.—I. Coals, rye, flour, and colonial goods; E. Pit props, planks, staves, battens, and oats. Accn. Small harb., which can admit vessels of 19ft dft, excellent anchorage, and good dry dock. Charges. Harb. dues 1d ton; custom-house dues 1½d; light dues, 4d cargo, 2d ballast. Pilotage. In and out, for vessels of 13ft dft. £1 6s 6½d. Towage. For vessels of 200 tons reg., in and out, about £2 10s.

OSTEND, Belgium. Lat. $51^{\circ} 15' N$; long. $2^{\circ} 26' E$. Pop.

About 20,000. THW. oh 25m; Sp. rise 19ft; N. 15ft. Tr.—I. Coal, salt, colonial produce, manufactured goods, guano, and timber; E. Corn, cloves, seed, cattle, fruits, potatoes, flax, &c. Accn. Vessels drawing 16ft can always enter at HW., and some drawing 20ft have gone in during ST. 6ft on the bar at LW., and same inside the harbour. Sp. rise 14 to 16ft; N. rise 11 to 12 ft. Ostend ranks second in importance among the Belgian ports. Cranes to lift 10 tons. Charges. On a vessel of 259 tons £25 1s 9d. Pilotage.—

Winter.				Summer.			
In.		Out.		In.		Out.	
£	s. d.	£	s. d.	£	s. d.	£	s. d.
From	1 12 6	1 3 2		1 8 6		1 0 0	
for vessels about 8ft dft. to—							
	6 7 3	4 8 6		5 18 0		8 2 6	

for vessel about 17ft 6in dft. Vessels calling and not performing any commercial operation pay half the above; towed vessels and steamers a little less. Towage. Charges for first hour or fraction thereof:—A ship under 100 tons 31/6, two or more vessels under 100 tons 47/6, every vessel above 100 and under 200 tons 35/6, 200 and under 300 40/, 300 and under 400 44/, above 400 tons 60/. For each hour or fraction of an hour after the first hour, whatever the number or tonnage of the vessels, 15/10½.

OTAGO HARBOUR or PORT DUNEDIN, New Zealand. Lat. $45^{\circ} 47' S$; long.

$170^{\circ} 45' E$. Tr.—I. Coal, railway materials, manufactured goods, &c.; E. Gold, wool, timber, potatoes, grain. Accn. The average depth at LWST. in Otago north or main channel is 18ft; mean rise at HW. about 18ft. Vessels not over 14ft discharge at Dunedin wharves. Charges. Light dues 3d to 6d ton. Port charges, half-yearly 2d to 6d ton. Harb. master's fees 1d ton. Wharfage, steamers ½d, sailing ¼d ton. Pilotage. In and out, sailing vessels without a tug 6d, steamers 4d; sailing vessels with a tug 4d reg. ton. In addition to these rates there is a charge of 15/ day for the first 3 days, and 10/ day after the first 3, for any period that a pilot might be detained on board any vessel, whether by stress of weather, quarantine, or otherwise. Vessels in distress, and whaling vessels

putting into port through stress of weather, for water or provisions, or to refit, are to be exempt from pilotage, except when the services of a pilot are actually made use of.

OWEN ANCHORAGE.—See Swan River.

PALAMOS, Spain. Lat. $41^{\circ} 51' N$; long. $3^{\circ} 6' E$. Accn.

At the end of the mole there are 20 to 21ft and inside 12 to 18ft of water. Pilotage. Voluntary, 16/8.

PALERMO, Sicily. Lat. $38^{\circ} 8' 15'' N$; long. $13^{\circ} 22' 12'' E$.

Pop. 250,000. Tr.—I. Cotton, woollen, silk, and linen goods, coals, cereals, hides and skins, animals, and animal produce, petroleum, metals, colonial products, &c.; E. Green and dried fruit, shumac, sulphur, oils, manna, tartar, lemon juice, rags, wine, &c. Accn. 9 to 10 fms of water in bay. Vessels drawing 18ft can anchor at the mole. There is a hydraulic dock 287 feet in length, and three graving docks. Charges. Port charges on a vessel 275 tons, £15 16s 8d. Pilotage. Optional, but if a pilot is required, only an authorised one can be called. From 12/8 for vessels up to 50 tons to £2 3s 6d for vessels of 401 to 500 tons. For every 100 tons over 500, 2/4½ extra.

PANAMA, U.S. Columbia. Lat. $8^{\circ} 56' 56'' N$; long. $79^{\circ} 31'$

$12'' W$. Pop. About 13,000. Tr.—I. Coal, confectionery, olive oil, clothes, candles, wheat, salt meat, iron manufactures, perfumery, &c.; E. Mother-of-pearl, pearls, leather, skins, caoutchouc, tortoiseshell. Accn. The inner anchorage is in 2 fms, about a mile off the shore, the outer is in $3\frac{1}{2}$ to 4 fms, about 2 miles off, bottom of mud. Vessels drawing 20ft can coal at Perico, an island in the bay. Pilotage. No pilot is necessary.

PARA (or BELEM), Brazil. Lat. $1^{\circ} 30' S$; long. $48^{\circ} 23'$

W . Pop. 35,000. Tr.—I. Provisions, petroleum, furniture, lumber, dry goods, hardware, wines, &c.; E. Indiarubber, annatto, nuts, balsam, hides, cocoa, sugar, piassaba, sarsaparilla, &c. Accn. The port is about 70 miles from the mouth of the river, but is accessible to the largest ships. Vessels moor about $\frac{1}{4}$ of a mile from the town in 12 to 22ft. of water. At the wharves there is a depth of 6 to 7ft. at low water. There is a gridiron for vessels up to 600 tons. Cranes to lift up to 20 tons. Charges. Expenses of a vessel 335 tons, cargo in and ballast out, about £80. Pilotage. Compulsory both ways. In, about £7, out £9.

PARAIBA, Brazil. Lat. $7^{\circ} 06' S$; long. $34^{\circ} 53' W$. Pop.

13,000. Tr.—E. Cotton, sugar, hides, cotton-seed, &c. Accn. 18ft can be carried over the bar at LW. Vessels drawing not more than $14\frac{1}{2}$ ft when loaded can load alongside wharf. In extra springs vessels drawing $15\frac{1}{2}$ ft can leave the wharf. Pilotage. For a vessel of 200 reg. tons; 12ft dft. £4 14s 6d, and for every fraction of 50 tons or foot of water increase, e.g., a vessel of 205 tons, 12ft 1in dft. pays £5 3s 6d. Charged both in and out. Vessels remaining in quarantine at Cabedello pay one-third less, and vessels going up to the Bridge of Sanhana one-third more.

PARRSBORO, N.S. Lat. $45^{\circ} 23' N$; long. $64^{\circ} 20' W$. Tr.

—E. Lumber. Accn. Safe port for a vessel drawing 16ft at ST. Vessels load alongside wharves on a mud bottom. A pilot should be engaged. Charges. Dues and charges on a vessel of 400 reg. tons about £10 8s 4d. Wharfage 2(1 day.

PASAGES, Spain. Lat. $43^{\circ} 19' 20''$ N ; long. $1^{\circ} 55' 20''$ W.

Pop. 3,000. Tr.—I. Coals, cotton, &c. ; E. Ore, cider, wine, minerals, fruit, &c. Accn. Anchorage depth of 30ft at LW. Vessels of 1,000 tons can discharge alongside of quay. Pilotage. Compulsory for coming in, but not for going out. For coming in at San Sebastian and Pasages :—

	1st Boat.	2nd Boat.	Pilot Dues.
	£ s. d.	£ s. d.	s. d.
Under 50 tons	0 10 9	0 10 4	8 4
From 50 to 100 tons	1 2 6	0 16 3	8 4
„ 100 to 200 „	1 10 0	1 4 4½	8 4
Above 200 tons	1 17 9	1 12 6	8 4

From the anchorage to the wharf :—

	1st Boat.	2nd Boat.	Pilot Dues.
	£ s. d.	£ s. d.	s. d.
Under 50 tons	0 9 7	0 9 7	4 2
From 50 to 100 tons	0 19 10	0 13 8	4 2
„ 100 to 200 „	1 6 4	1 0 8	4 2
Above 200 tons	1 13 6½	1 8 0	4 2

For going out during the day :—

	1st Boat.	Pilot Dues.
	£ s. d.	s. d.
Under 50 tons	0 8 5½	8 4
From 50 to 100 tons	0 1 10½	8 4
„ 100 to 200 „	1 5 4	8 4
Above 200 tons	1 8 1½	8 4

For going out during the night :—

	1st Boat.	Pilot Dues.
	£ s. d.	s. d.
Under 50 tons	0 12 11	8 4
From 50 to 100 tons	1 5 10	8 4
„ 100 to 200 „	1 10 11	8 4
Above 200 tons	1 17 8½	8 4

Towage. The first boat reaching the vessel must be employed, each man in her is paid 2/6 sterling. The employment of other boats is optional, and the pay only 1/10½ man.

PATRAS, Greece. Lat. $38^{\circ} 14' 47''$ N ; long. $21^{\circ} 44' 47''$ E.

Pop. About 40,000. Tr.—I. Woollen and cotton manufactures, grain, sugar, timber, staves and hoops. sulphur, iron, hides and leather, coffee, codfish, rice, and coals ; E. Currants. Accn. There is a mole about 800ft long, at the extremity of which the depth is about 4 fms. Charges: Vessels under 5 tons are free of dues. Port dues ½d ton if cargo only landed, 1½d if landed and shipped. Water plentiful, 1/6 per 60 galls. Com. and brokerage 5%. Pilotage. From 8/8 to 20/ for bringing the vessel to her anchorage.

PENANG, India. Lat. $5^{\circ} 24' 30''$ N ; long. $100^{\circ} 21'$ E.

Pop. 111,000. Tr.—I. From England various kinds of piece goods, iron, cutlery, &c. ; E. Pepper, arrow-root, cassava flour, cloves, coffee, fish-maws, hides, horns, sugar, tapioca, tortoiseshell, betel nuts, rattans, gutta percha, indiarubber, tobacco, and some gold brought by the Malay proas from the main Sumatra, Java, and other islands to the eastward, and for which they receive opium, piece goods, arrack, dollars, &c. Accn. The anchorage is considerably sheltered. Charges. Light dues, there is a small charge for lights, but no anchorage dues, or other port dues. Pilotage. No pilot dues when vessels enter by the north channel, but by the south channel they pay 3/1½d per foot. On a vessel of 268 tons leaving Penang with a miscellaneous cargo of pepper, sugar, rattans, &c., in or out (optional) £1.

PENCO.—See Concepcion Bay.

PENSACOLA, U.S. Lat. $30^{\circ} 20'$ N ; long. $87^{\circ} 16'$ W. Pop.

11,000. Tr.—I. Salt, beer, coal, sugar, molasses, and West Indian fruits ; E. Pitch pine, sawn and hewn

timber, and lumber. The timber is principally exported to Great Britain. The charters are usually made in England, vessels carrying coals to the West Indies and Mexico, and from thence in ballast to Pensacola. Lumber is largely exported to Cuba and other West Indian islands, Mexico, Brazil, and the river Plate. Accn. At mean HW. depth on bar is 22ft near the channel, from the bar to the dockyard average depth is 28ft, and from the latter to town 3ft; alongside the wharves at Pensacola the depths vary from 16ft to 20ft. **Charges.** On vessel of 636 reg. tons, ballast in and cargo out £404. **Pilotage.** 6 to 10ft dft. 12/8½; 10 to 14ft dft. 16/11; 14 to 20ft dft. £1 1s 1½d; 20 and upwards £1 5s 4½d foot. **Towage.** From outside bar 7½d, inside bar 5d, to sea, loaded 10d ton.

PERNAMBUCO, Brazil. Lat. 8° 4' S; long. 52° W. Pop. 120,000. Tr.—I. Cotton and linen clothes, hardware, cutlery, silks, wine, flour, salt fish, &c.; E. Cotton, sugar, rum, hides, and dyewoods. Accn. No vessel drawing more than 14½ft can enter at NT., or more than 18½ft at ST. The great bar has 20ft over it at HWST. Immediately northward of the "Recife," outside the harbour, is a basin called the "Poco," or Well, having a depth of 20ft at LW. Here vessels of more than 14ft dft. lighten to go inside and take in the last part of their cargoes. **Charges.** Average on vessel with cargo, in and out, about £1 2s 6d reg. ton. Cost of victualling and repairing vessels is heavy. Dues and charges on vessel drawing 13½ft £180. **Pilotage.** On vessel of 237 reg. tons, cargo of fish in and sugar out, 13½ft dft., pilotage inwards and mooring £12 16s 6d, outwards £11 8s. **Towage.** Inward and outward the same, but not compulsory. For the first English or American 100 tons £3 7s 6d; and for each ton in excess about 2½d. For the use of hawser, if furnished by the tug, 20 per cent. is added to the above. For towing a lighter to where the vessels usually anchor and bringing it back £5 12s 6d.

PESARO, Italy. Lat. 43° 55' N; long. 12° 54' E. Pop. 20,854. Tr.—E. Wine, olives, silk, and glass bottles. Accn. Vessels of 6ft draught anchor inside entrance, between two jetties; vessels of larger draught in 5 to 6 fms. in fine weather. **Charges.** Port dues 8d ton.

PHILADELPHIA, U.S. Lat. 39° 57' N; long. 75° 10' W. Pop. About 1,000,000. Tr.—I. All kinds of general merchandise; E. Breadstuffs, provisions, petroleum, cotton, tobacco, oilcake, staves, &c. Accn. Has an excellent harb. capable of receiving the largest vessels afloat; 27ft of water at HT. Three graving docks 462ft, 220ft, and 125ft long respectively, and three patent slip railways. Shears to lift 90 to 100 tons. **Charges.** Wharfage dues 16/, (ship) barque, &c. 12/ per day. **Pilotage.** Varies according to distance and dft. Minimum: inwards 12ft dft. £8 10s 9d; outwards 12ft dft. £7 12s 3d. Maximum: inwards 27ft dft. £26 2s 6d; outwards 27ft dft. £17 2s 7d. Every pilot detained by master, owner, or consignee, or by the ice, is entitled to 12/8½ day. Every pilot obliged by the ice or stress of weather to proceed to another port is entitled to pilotage, and if there discharged to 4d for every mile he has to travel home. Every vessel obliged to receive a pilot is required to pay £2 2s 3½d winter pilotage from Nov. 1 to April 1, both days inclusive, except such vessel is towed by steam to or from the buoy of the Brown. Spanish, Portuguese, Italian, Russian and South American ships pay 10/8 in addition to other pilotage. **Towage.** Varies according to distance and

but the harb. is plentifully dotted with rocks. Small vessels drawing 6ft of water can anchor at the end of the pier at LW. **Charges.** There is no charge for tonnage or harb. dues for vessels coming to the port seeking or sailing in ballast. **Pilotage.** In and out 600 tons and upwards £3; 400 and under 600, £2 5s; 200 and under 400, £1 10s.; 100 and under 200, £1 2s. Pilots detained on board any vessel longer than 48 hours are entitled to claim 8/ for every day's detention after that time.

POINTE-A-PITRE, Guadaloupe, W.I. Lat. 16° 20' N; long. 61° 20' W. Pop. 18,380. Accn.

Spacious harb., 36ft, in the channel. Vessels drawing 26ft may lie close to the town; vessels drawing 14ft can discharge at the quay. **Charges.** Vessels trying the markets may come in free of all charges. **Pilotage.** On three vessels as follows:—In and out, 190 tons £5 14s 3d; 291 tons £7 16s; 449 tons £9 17s 6d. **Towage.** By steamer, minimum £4; up to 1,000 reg. tons 4½d ton; every ton over, 2½d. By rowboat and four hands, £1. **Eng. Brokers.** Ferlande, Maillard, Thionville.

POMERON, Portugal. Lat. 37° 10' N; long. 7° 15' W. Pop. 4,000. Tr.—E. Sulphur, ore, &c. Accn.

Vessels drawing 16ft have reached Pomeron. **Charges.** Port charges on a vessel of 414 tons reg. (including pilotage over the bar up and down river) about £11. Total expenses of a vessel of 400 tons loading sulphur-ore (including pilotage and towage both ways) about £55.

PONDICHERY, India. Lat. 11° 56' N; long. 79° 50' E.

Pop. 60,000. Tr.—E. Indigo, rice, tobacco, cotton. Accn. Anchorage in 6 or 8 fms, ½ mile from town. **Charges.** Tonnage dues 2d per ton; light dues 1½d per ton; anchorage dues 1/ per ton.

PONTA DEL GADA, St. Michaels, Azores. Lat. 37° 45' N; long. 25° 41' W. Pop. 23,000.

Tr.—I. Coals, dry goods, hardware; E. Oranges, emons, wheat, Indian corn, wines, beans, potatoes. Accn. Anchorage in 15 to 30 fms. There is a mole, inside of which vessels of any size can lie in comparative safety. Floating dock, capable of raising a vessel of 1,400 tons. **Charges.** On a vessel of 100 tons about £30. **Pilotage.** Vessels of less than 200 tons, 10/10; less than 400 tons, 13/6; less than 800 tons, 16/6; less than 1,200 tons, 17/10; over 1,200 tons, £1 2s. 6d.

PORT ADELAIDE, South Australia. Lat. 34° 56' S; long. 138° 36' E. Pop. 30,000. Tr.

—E. Wool, wheat, bark, gold, copper and lead ores, salted hides, tallow, gums, wine, fruit, &c. Accn. 22ft on the outer bar at LWOST., and 20ft on the inner bar. Average rise and fall at ST. 8½ft. The wharves at Port Adelaide are about two and a half miles long, the depth alongside varying from 18ft to 24ft at LW. **Charges.** Light dues 1d reg. ton, in or out. Wharfage 3d reg. ton. Expenses of a vessel of 1,000 tons reg. £102, including light dues, wharfage dues, pilotage in and out, and harb. pilotage (optional). Dft. of water has nothing to do with these charges. **Pilotage.** Compulsory: Every vessel taking a pilot, not ex. 100 tons, in or out £2 10s, for every reg. ton above 100 tons, in or out 1½d, provided that in any case the pilotage of any vessel does not exceed £9, reduced by one-fourth with steam vessels or sailing vessels towed by steamtugs, or part of distance

missary Point (10 miles) one-fourth off ; to Douglas Bank (28 miles) one-fourth additional. These rates are for fair weather, and exclusive of the use of hawser.

PORT DARWIN, Queensland. Lat. $12^{\circ} 28' 28''$ S ; long. $130^{\circ} 52'$ E. Accn. The harb. is suitable for vessels of the largest tonnage, having deep water. No port charges.

PORT DENISON, Queensland. Lat. $20^{\circ} 0' 50''$ S ; long. $148^{\circ} 17' 51''$ E. Tr.—E. Wool, tallow, hides, gold, sheep, skins, &c. Accn. There are two channels leading into the harb. ; the south with 22ft at LWST. ; the north with 14ft ; rise of tide 5 to 11ft. Inside the harb. the depth at LWST. is from 10 to 26ft. Vessels drawing 16 to 17ft come alongside the jetty to discharge. Pilotage. 4d ton, minimum £1 10s. Foreign-going steamships (not being intercolonial trade vessels) whilst on a foreign voyage, but not carrying cargo coastwise, are allowed a remission of the customary pilotage dues, except in respect of an amount equal to 1/ ton on all cargo landed and shipped.

PORT DUNEDIN.—See Otago Harbour.

PORT ELIZABETH, Africa.—See Algoa Bay.

PORT ELLIOTT, VICTOR, & ROSETTA HARBOURS, South Australia. Lat. $35^{\circ} 34'$ S ; long. $138^{\circ} 39'$ E. Tr.—I. Fencing wire, coal, timber, potatoes, groceries, ironmongery, and general goods used by settlers ; E. Wool, copper, bark, wheat, flour, hides, tallow, honey. Accn. There are heavy moorings for three vessels in depths varying from 9½ft in shore to 19½ft seaward. Additional moorings have also been placed, affording accn. for five vessels. The outer berth has 30ft, middle 33ft, and inner berth 18ft at OLWST. Charges. Expenses of a ship 1,038 reg. tons £45 1s 8d. Pilotage. Vessels of 100 to 200 tons £2 in, and the same out, every ton above 200, ½d ton in and out. For every foot or part of a foot dft. above 9ft, in or out, 10/.

PORT JACKSON, Sydney, N.S.W. Lat. $33^{\circ} 54'$ S ; long. $151^{\circ} 11''$ E. Pop. 333,000. Tr.—I. Wines, spirits, manufactured goods, wearing apparel, hardware, earthenware, saddlery, books, stationery, carriages, tea, sugar ; E. Wool, tallow, hides, felts, horns, hoofs, bones, leather, gold, copper, copper ore, tin, tin ore, shale, and pearl shell. Accn. At Sydney there is staging with shipping accommodation in from 12 to 26ft at LW. There are also berths where vessels can discharge their cargoes without staging, by lying alongside the wharf with plenty of water. Vessels of 27ft dft. at LWST. or 32ft at HW. can, in fine weather, cross the bar. Sydney is about 4 miles from the bar. Dry dock, two graving docks, and patent slip. Charges. Harb. dues : Vessels under 300 tons 20', and 5' additional for every 100 tons up to 1,000, over 1,000, £3. Expenses of an American vessel of 1,200 tons loading 1,400,208 lbs. of wool and 1,000 casks of tallow, including commissions and expense on inward cargo, £1,300. Pilotage. 4d ton in and out. Pilots detained in quarantine £1 per day, 8/ of which will be charged to the vessel. Towage. To or from sea, under 150 tons £2 10s, removals 15/ ; 150 tons and under 200, £3, removals £1 1s ; 200 and under 250, £3 10s, removals £1 1s ; 250 and under 300, £4 4s, removals £1 10s ; 300 and under 400, £4 10s, removals £1 10s ; 400 and above, to and from sea 8d ton, one way 6d ton. For one removal

PORT NOLLOTH, Africa. Lat. $29^{\circ} 15' 50''$ S ; long. $16^{\circ} 52' 20''$ E. Tr.—I. Manchester goods, silks, woollens, hardware, groceries ; E. Hides, skins, copper-ore, ostrich feathers, horns, &c. Accn. A pier with 11ft at end. At LW. vessels of 8ft dft. only can enter. Pilotage. Over the bar, £1 1s. Towage. Cape Copper Mining Co., Ltd., have a small tug.

PORT OLIVIERI, Turkey: Tr.—E. Oil, pine, timber, silk, grapes, figs, cotton, and pitch. Accn. Only a cable broad in parts of the entrance, and is only suitable for vessels of 11ft dft. On the SE. coast ; is the principal harb. in the island. Pilotage. On a vessel of 133 reg. tons, empty casks in and cargo of olive oil out, in and out £1 1s 8d.

PORT PHILIP, Victoria. Lat. $37^{\circ} 49' 5''$ S ; long. $144^{\circ} 58' 35''$ E. Accn. The least depth of water in the fairway channel to Port Philip is 27ft. Charges. Port dues 1/ ton once every six months. Charges and dues on a vessel 1,199 reg. tons with 1,000 tons of cargo £451 6s.

PORT ROYAL, U.S. Lat. $32^{\circ} 15' N$; long. $80^{\circ} 40' W$. Pop. 500. Tr.—I. Salt and manufactured fertilisers ; E. Cotton, cotton seed, timber, lumber, phosphate rock, and manganese ore. Accn: Vessels drawing 22ft can enter the harb. at NT. and moor alongside wharves. Cranes capable of discharging 150 to 200 tons per day. Charges. Harb. master's fees 12/6 per vessel. Pilotage. Same as Beaufort. Towage. Same as Beaufort.

PORT SAID, Egypt. Lat. $31^{\circ} 15' 35'' N$; long. $32^{\circ} 19' 20'' E$. Pop. About 8,000. Tr.—I. Mainly coals, provisions, and chandlery ; E. Cotton and cotton seeds, with occasional lots of East India goods in transit. Accn. An artificial harb. well sheltered by breakwaters, and with a sufficient depth of water for the largest ships. Charges. On a vessel of 547 tons about £43. Pilotage. On a steamer of 547 reg. tons entering with cargo of 808 tons coal, drawing 16½ft aft. and 15½ft forward, harb. dues and pilotage £3 14s 3d. Towage. On vessel of 1,000 tons about £20

PORT VENDRE, France. Lat. $42^{\circ} 30' 59'' N$; long. $3^{\circ} 7' 24'' E$. Pop. About 2,100. Accn. The least depth close to the quays is 16ft, with an average of 22ft. Towage. Same as Marseilles.

PORTLAND, Me. U.S. Lat. $43^{\circ} 27' 32'' N$; long. $70^{\circ} 12' 9'' W$. Pop. About 40,000. Tr.—E. Wheat, peas, flour, pork, lard, lumber, &c. Accn. Has a large, deep, and well-sheltered harb. ; vessels of the largest class enter ; ships come up to lower wharves drawing 20ft at LW. Two dry docks. Charges. On a vessel of 1,050 tons reg., ballast in, lumber out, £200. Pilotage. Pilotage not compulsory. The usual rate is about 8/4 ft, except when an agreement is made, which can be done for 4/2 ft, or even less. Towage. Rates low.

PORTO MULA, Crab Island, W.I. Pop. About 1,100. Accn. Harb. formed by two reefs extending about three-quarters of a mile. Vessels of 16ft dft. can enter the harb. Porto Mula is situated on the north coast of the island.

PORTO TORRES, Italy. Lat. $40^{\circ} 50' N$; long. $8^{\circ} 24' E$. Pop. About 1,500. Tr.—E. Oil, wine, cereals, skins, and cattle, the latter almost exclusively to Marseilles. Accn. Depth of water sufficient for vessels up to 350 tons. Charges. On vessel of 200 tons about £10. Pilotage. £2 7s 6d, including mooring.

tons entering at Puerto Plata and proceeding to Cabarete to load mahogany £2 4s 3d ; to and from Cabarete £7 5s 10d. Towage. On a vessel of 177 reg. tons £2 1s 8d.

PUERTO JOBOS, W.I. Lat. 17° 50' N ; long. 66° 14' W.

Accn. A fine landlocked harb. ; 3 to 3½ fms. in the harb. ; rise of tide about 2ft. Charges. On a vessel of 250 tons about £10. Pilotage. On a vessel of 247 reg. tons, captain of port and pilotage £5 1s 7½d.

PUERTO PONCE, W.I. Lat. 17° 56' N ; long. 60° 29' W.

Pop. 17,000. Tr.—I. Breadstuffs, provisions, dry goods, lumber, petroleum, liquors, iron, cooperage ; E. Sugar, molasses, tobacco, hides, cattle, coffee, starch, oranges, and cotton. Accn. No vessel drawing more than 16ft should charter for this port. Charges. On a vessel of 320 tons about £178. Pilotage. From £1 17s 6d for vessels up to 80 tons, in and out, payable in Spanish money, to £6 5s for vessels of 1,000 tons ; upwards £8 6s 8d ; changing berth each time, quarter pilotage rates ; all vessels entering or leaving port between sunset and sunrise, double rates.

PUGWASH, N.S. Lat. 45° 52' N ; long. 63° 45' W. Pop. 2,000. Tr.—E. Timber and agricultural produce.

Accn. Vessels lie securely in a small enclosed basin with a depth of 6 fms. 16ft at LWOST. on bar ; Sp. rise 7ft and N. 4ft. Charges. Harb. dues £1. Pilotage. On a vessel of 306 reg. tons, in and out £5. Towage. £6 5s to £10 10s, according to size.

QUEBEC, Canada. Lat. 46° 49' N ; long 71° 31' W. Pop.

60,000. Tr.—I. Dry goods, groceries, salt, coals, hardwares, liquors, &c. ; E. Timber, deals, grain, &c. Accn. A safe and commodious harb. The largest vessels can lie alongside the wharves. Eight floating dry docks, one graving dock, and one patent slip. Charges. Harb. dues on vessels, under 1,000 tons ½d, over 1,000 tons ½d ton per day. Tonnage dues 2½d reg. ton. Dock dues 10d. ton. Charges on a vessel of 538 tons inwards about £87. Ships are liable for moorage and wharfage, unless stipulated. Wharfage about 6½d ton. Pilotage. Varies from 6/ foot to 28/ foot according to distance and time of year. Towage. Varies according to distance and size of vessel. For vessels of 300 tons £10 9s 2d ; 1,800 tons £46 17s 6d. If employed by day, first day £52 1s 8d ; every subsequent day, £41 13s 4d. If by hour, first hour £5 4s 2d ; every subsequent hour £2 12s 1d. After November 1 a special arrangement must be made for towages up and down. Towing only to or from Quebec 50 per cent. additional.

QUILLEBOEUF, France. River Seine. Pilot station. Eng. Broker. Le Bret.

QUILLIMANE, Africa. Lat. 18° 1' 24" S ; long. 36° 59' 27"

E. Pop. 3,500. Accn. 9ft of water on bar ; tides rise 16ft. Vessels of 16ft have recently crossed bar. Pilotage £2 10s for each vessel. Towage from £15 to £25.

QUILLON, India. Lat. 8° 35' 30" N ; long. 76° 36' E. Pop.

30,000. Tr.—I. Piece goods ; E. Cocoanut oil, coir mats, yarn, and fibre. Accn. Anchorage 4 to 5 fms.

RABAT, Spain. Pop. 40,000. Tr.—I. Cotton goods, iron,

tea, coffee, sugar, silk and cotton handkerchiefs, knives, cloth, crockery, candles, cotton, spices, &c. ; E. Wool, wax, maize, beans, goat and sheep skins, carpets, and slippers.

PORT DIRECTORY—FOREIGN PORTS.

and the Darsena 13ft. **Charges.** Light dues 1d reg. ton. **Pilotage.** No fixed charges, but vessels usually pay £2 for entering and clearing.

RICHIBUCTO, N.B. Lat. 46° 38' N; long. 66° 55' W. Pop. 2,000. **Tr.**—E. Timber, preserved salmon, &c. **Accn.** Vessels drawing more than 15½ft cannot cross bar. Vessels inside load in 18ft water alongside wharves. **Charges.** Tonnage dues 3d ton. **Wharfage** 4/2 to 6/3 day. **Pilotage.** In or out, 6/3 foot. **Towage.** A steamtug can be had if necessary.

RICHMOND, U.S. Lat. 37° 30' N; long. 77° 26' W. Pop. 77,500 (in 1878). **Tr.**—A large quantity of salt in bags is imported; E. Flour in barrels to the Brazils and England in the summer season, tobacco to the Mediterranean. **Accn.** Vessels drawing 16ft can reach Richmond, and those of 18ft dft. can reach City Point at LWST. **Charges.** No wharfage. **Harb. dues** ½d reg. ton. **Pilotage.** From sea to Hampton Road drawing up to 12ft 10/6½ foot, from 12 to 16ft, 13/3½ foot, from 16 to 18ft, 16/3½ foot. **Towage.** 1/8 reg. ton (up and down) from Hampton Road to Richmond and back to Hampton Road.

RIGA, Russia. Lat. 57° 3' 22" N; long. 24° 1' 30" E. Pop. About 170,000. **Tr.**—I. Coffee, cottons, woollens, fruits, herrings, oil, indigo, salt, tobacco, wines, spirits, sugar, &c.; E. Flax, hemp, wheat, rye, barley, oats, linseed, wool, hides, tallow, timber, tobacco, spars, feathers, and hemp seed. **Accn.** Usual depth of water on bar 16 to 17ft, and 20ft alongside quay. Vessels 16 to 17ft can ascend river as far as inner harb. A patent slip, 715ft long, for vessels up to 1,200 tons. Crane to lift 25 tons. **Charges.** Port charges on a vessel of 247 tons £10. **Pilotage.** On a vessel of 247 reg. tons, ballast in and cargo out £3 12s 4d. From Bugt in Muhlgraben 9/9. **Towage** On a vessel of 247 reg. tons, ballast to and cargo out:—From Bolderaa to Bugt £1 12s 6d; Bugt to Muhlgraben £2 8s 9d; Muhlgraben to sea £4 11s.

RIO DE JANEIRO, Brazil. (Atlantic.) Lat. 22° 54' 42" S; long. 43° 9' W. Pop. 380,000. **Tr.**—I. Cotton manufactures, flour, wine, hardware, salt, fish, butter, coals, cordage, copper, iron, lead, leather, paint, tea, wax, vermicelli, &c.; E. Coffee, sugar, hides, horns, rice, rum, rosewood, ipecacuanha, tobacco, tapioca, gold, and diamonds. **Accn.** One of the finest harbours in the world, but the dock accommodation is very limited. The least water in the harbour is 5½ fms., and there is deep water all the way to the anchorage off the town. To the northward of the anchorage the water continues deep, and the harbour is navigable for small vessels in every part of it. Two graving docks, one 300 by 70 by 28, and one of larger dimensions. **Charges.** On a vessel of 200 reg. tons £43. **Pilotage.** There are native pilots, and one is generally employed. No rates given. **Towage.** If required, good tow-boats are to be had, but there are no dangers in entering the port, there being from 5 to 6 fathoms of water all the way to the anchorage. The rates are very high, amounting to £90 for a vessel 1,500 tons, both ways.

RIO GRANDE DO SUL, Brazil. (Atlantic.) Lat. 32° 07' S; long. 52° 05' W. Pop. 16,000. **Tr.**—I. Coal, salt, wine, spirits, flour, oil, lard, candles, and manufactured goods; E. Hides, dry and salted, horns, bone and bone-ash, dried beet, wool, hair, &c. **Accn.** The port stands 7 miles from the bar; the anchorage is fairly good, but vessels scmet

drag. No vessel drawing more than 11½ ft. should attempt to cross the bar. Ships with that dft. are sometimes detained a fortnight. All foreign vessels, except those with general cargoes, and vessels of light dft. proceed on their arrival to the anchorage of San José do Norte, where salt-laden vessels discharge their cargoes. The anchorage there is good in from 5 to 7 fms. Coal-laden vessels are thence ordered to the town of Rio Grande, distant about 3 miles, to discharge, but the vessel must first be lightened to 9½ ft. **Charges.** The port is a very expensive one. All charges on a vessel are calculated in Brazilian tons, or 28 per cent. more than English reg. tonnage. The total expenses are estimated at £1 per reg. ton. **Pilotage.** The pilotage rates are very heavy, and many masters prefer to take steam. **Towage.** There are two powerful steamtugs, but the charges are also very high—about 1/9 per reg. ton. A vessel of 123 reg. tons paid £11 5s for being towed over the bar outwards, which occupied about 20 minutes.

ROCHEFORT, France. Lat. 45° 56' N; long. 0° 58' W.

Pop. 29,000. **Accn.** Two floating docks and a dry dock. Vessels drawing 22 ft remain afloat in the port. 22 ft in the docks, and general depth in the river 18 ft to 20 ft LW. Above the dry dock is the old harb., with 23 ft of water. **Charges.** Vessels at this port are exempt from dock dues. Charges of all kinds for sailing vessels discharging a cargo and returning in ballast come to about 3/7 reg. ton. **Pilotage.** According to distance of stations, as follows:—Sea to Isle of Aix 15/10 to £4 3s 1½ d; Isle of Aix to Port au Basque 9/6 to £3 3s 4d; Port au Basque to Soubise 8/9 to £2 11s 1d; Soubise to Vanguard, or Vanguard to Rochefort 7/11 to £1 17s 6d, according to dft. **Towage.** 7d reg. ton from Aix roads to Rochefort or Charente, or 9½ d for vessels coming up laden and down in ballast, or 11½ d with cargoes both up and down. **Eng. Brokers.** V. Bachelar, E. Bachelar, C. Lafitte, G. Limousin.

ROCHELLE, France.—See La Rochelle.

ROCKHAMPTON, Queensland. Lat. 23° 30' S; long. 151° E. **Pop.** 8,500. **Tr.**—E. Wool,

gold, copper, hides, tallow. **Accn.** Vessels of 13 ft can go to wharf. **Pilotage.** 5d per ton, minimum £2.

RONNE, Island of Bornholm. Lat. 55° 5' N; long. 14° 47'

E. **Tr.**—I. Coal, timber and iron; E. White and grey clay, rough and hewn granite, grain, &c. **Accn.** 22 ft at entrance, 18 ft inside. Vessels can be repaired and repainted. Ronne is the capital of the island, the population of which is 38,000. **Charges.** Vessel of 200 tons about £8 in, and £2 10s out (in ballast), £2 with cargo.

ROSARIO, Argentine Confederation. Lat. 32° 57' S; long. 60° 36' W. **Pop.** 52,000. **Tr.**—I. Lumber,

coals, petroleum, manufactured goods, &c.; E. Wool, hides, bones, tallow, copper, &c. **Accn.** Vessels should not draw more than 16 ft when laden, though a good many vessels drawing 17 ft have from time to time loaded or discharged here. **Charges.** About 2½ d reg. ton inclusive. **Pilotage.** Port pilot, for mooring into wharf, or going to sea 25/.

ROSETTA HARBOUR.—See Port Elliott, Victor, and Rosetta Harbours.

ROSTOCK, Germany. Lat. $54^{\circ} 4' N$; long. $12^{\circ} 15' E$.
Pop. 40,000. **Tr.**—I. Coal, salt, iron, limestone, herrings and other provisions, timber, chalk, and colonial produce; E. Wheat, barley, oilcake, bones, peas, and rags. **Accn.** Vessels of 14ft dft. may ascend the river to this port. A large iron shipbuilding yard and patent slip. **Pilotage.** From sea to Warnemünde about 3/ foot, and *vice versa*; from Warnemünde to Rostock and *vice versa* as follows:—From 9/3 for vessels of 50 to 75 reg. tons, to about 19/ for vessels of 175 reg. tons, and larger. **Towage.** Between Rostock and Warnemünde:—From 36/ for vessels up to 100 reg. tons in ballast, and 42/, with cargo, to 80/ and 95/ for vessels of 381 to 400 tons; each 20 reg. tons larger size 5/ additional. From sea to Warnemünde, or *vice versa*:—From 30/ for vessels up to 150 reg. tons to 50/ for vessels of 221 to 240; each 20 reg. tons larger size 5/ additional.

ROTTERDAM, Holland.—Lat. $51^{\circ} 55' N$; long. $4^{\circ} 30' E$.
Pop. 190,500. **THW.** 3h 45m; **Sp.** rise 7ft.
Tr.—I. Grain, coals, ores, drugs, dye-stuffs, chemicals, East India produce, sugar, coffee, tobacco, petroleum, cotton, rice, rags, guano, African produce, &c.; E. Provisions, manufactured goods, oxen, sheep, pigs, horses, sugar, &c. Rotterdam is one of the most important ports on the Continent. Of the total navigation of the Netherlands, no less than three-fifths pass through this port. Since the construction of the New Waterway vessels of the largest size are able to reach Rotterdam quickly and safely, ships drawing 21ft. coming up at any time, and those drawing 24 to 26ft. at high water. Formerly it took two or three days to reach Rotterdam from the sea; now it is done in two hours. Improvements are being steadily carried out in the direction of increased facilities for shipping, with the result that the trade of the port has more than doubled within the past fifteen years. There are three floating dry docks 288ft, 298ft, and 157½ft respectively, and two slips for vessels up to 1,200 tons. On the port hand when going up the New Waterway to Rotterdam are Maasluis, Vlaardingen, an important fishing centre, and Schiedam, which has a large grain trade, and 400 distilleries. Cranes to lift 60 tons. **Charges.** Harbour dues 1½d. per ton. No tonnage or light dues. **Pilotage.** Steamer of 1,000 tons. Sea pilotage:—

	Summer. April 1 to Sept. 30. £ s. d.	Winter. Oct. 1 to March 31. £ s. d.
Inwards, 15ft	5 0 4	6 12 0
„ 16ft	5 14 4	7 14 0
Outwards, 15ft	2 12 6	3 0 0
„ 16ft	3 5 4	3 14 8

River pilotage, inwards and outwards:—

15ft	1 1 10	1 5 10
16ft	1 4 0	1 7 10

Sailing vessel of 1,000 tons. Sea pilotage:—

Inwards, 17ft	9 4 0	11 17 0
„ 20ft	17 13 4	23 0 0
Outwards, 17ft	6 0 0	6 13 4
„ 20ft	12 16 0	13 12 0

River pilotage, inwards and outwards:—

17ft	1 12 0	1 16 8
20ft	2 3 0	2 9 0

SAN JUAN, W.I. Lat. $18^{\circ} 22' N$; long. $60^{\circ} 7' 15'' W$. Pop. 25,000. Tr.—I. Salt fish and meat, timber, butter, and machinery; E. Sugar, molasses, rum, and coffee. Accn. 38ft at the entrance, and 24ft alongside the coal wharf. Charges. On a vessel of 377 reg. tons about £10. Pilotage. On a barque 377 reg. tons, pilotage and weighing anchor £4 15s 10d.

SAN SEBASTIAN, Spain. Lat. $43^{\circ} 19' 30'' N$; long. $2^{\circ} 0' 6'' W$. Pop. 20,000. Tr.—E. Iron, wool, &c. Accn. San Sebastian has a dock to contain 32 vessels of 200 tons each. At the entrance of the harb. and dock during ST. and NT. 18 and 11ft respectively. A vessel drawing 12ft can nearly always enter both harb. and dock. Charges. Duty 6d ton on all merchandise imported. Pilotage. Compulsory for entrance but not for departure for all vessels above 50 tons. Vessels of 50 to 100 tons £1 5s; 100 to 200 tons £1 11s 3d; above 200 £1 17s 6d.

SANTA CRUZ, Teneriffe. Lat. $28^{\circ} 28' 30'' N$; long. $16^{\circ} 15' 09'' W$. Pop. 20,000. Tr.—I. Hardware, earthenware, cotton and woollen goods, coals, stores, leather, and dry goods generally; E. Wine, cochineal, tobacco, paving stones, provisions, fruit, &c. Accn. There is good anchorage where the largest vessels can safely lie close to the shore. Harbour works are making considerable progress. Cranes to lift 2 to 6 tons. Charges. This is a free port. Supplies are cheap, and excellent fresh water can be obtained. Pilotage (NP.) By day, 14/1; by night, 28/2.

SANTANDER, Spain. Lat. $43^{\circ} 27' 52'' N$; long. $3^{\circ} 47' 7'' W$. Pop. About 40,000. Tr.—I. Sugar, textile fabrics, salted codfish, pitch, &c.; E. Iron and copper ore, quicksilver, wheat, flour, wool, wine, and cobalt. Accn. The largest vessels can enter the port as far as the anchorage opposite the town. Charges. On a ship of 500 tons reg., with cargo in and out, about £15. Pilotage. All vessels above 50 tons must take a pilot. On a brigantine of 108 tons reg., cargo of pitch in and ore out, in £1 11s 3d, out £1 11s 3d, gratuity to pilot 4/2. Towage. Towages in harb. of vessel of 500 tons about 40/.

SANTOS, Brazil. Lat. $24^{\circ} 30' S$; long. $46^{\circ} 15' 30'' W$. Pop. About 11,000. Tr.—I. Flour, manufactured goods and wares, lumber, petroleum, machinery, &c.; E. Coffee, sugar, rum, tobacco, rice, cotton, hides, &c. Accn. The harb. is formed on the E. by the island of St. Amaro, and on the W. by the island of Eugua Guaçu. The bay has 4 to 10 fms water. On the E. side is the principal entrance to the harb. where vessels may lie in 30ft of water. Charges. On a vessel 200 tons £42 3s. Discharging at Custom-house free. Pilotage. From 26/ to 32/ vessel.

SARAWAK, Borneo. Lat. $1^{\circ} 02' N$; long. $110^{\circ} 18' E$. Pop. 20,000. Tr.—I. Cloth, brassware, salt, opium, tobacco, crockery-ware, rice, provisions, wines, beer, spirits, tea, ironware; E. Rice, timber, edible birds' nests, beeswax, pepper, canes, camphor, fish, sago, flour, gutta percha, raw and pearl sago, paint, antimony, indiarubber. Accn. Deep water alongside wharf for vessels of 1,000 tons; and at Kuching there are two wharves. Lowest depth of water in the navigable channel $2\frac{1}{2}$ fms. Sp. rise 18ft, and N. rise 10ft. Charges. Buoy and light dues about $\frac{1}{2}$ d ton. Pilotage. 8/4 foot. Towage. As per agreement.

SARPSBORG, Norway. Tr.—E. timber, deals, ice, battens. Accn. Sarpsborg is about 6 miles above Frederikstadt, and vessels drawing 20ft can ascend as far as town

and lie close alongside quay. **Charges.** On vessel of 320 tons about £36. **Pilotage.** On a vessel of 320 tons, in and out £5 8s 4d. **Towage.** On a vessel of 320 tons, in 65/.

SATILLA RIVER, U.S. Lat. 30° 54' N; long. 81° 32' W.

Tr.—E. Deals and boards are principally shipped to the Plate. **Accn.** There are always 18ft of water on the bar. Vessels drawing more than 14½ft complete loading at a land-locked harb. just below the flood shoals. **Pilotage.** A barque of 430 reg. tons entering with ballast and leaving with cargo, 14½ft dft., in and out £25 15s 11½d. **Towage.** A barque of 430 reg. tons, entering with ballast and leaving with cargo, from the Mills to Jekyl Island, about 16 miles, and below the shoals £11 13s 7½d.

SAVANA LA MAR, Jamaica. **Tr.**—E. Sugar, rum, coffee, hides; I. Manufactured goods, beer, spirits, provisions. **Accn.** Depth of 22ft inside reef. **Charges.** Light dues 3d. per ton, on sailing vessels only. Harbour dues: under 12ft 10/; over 12ft 20/. **Pilotage.** Inwards 30/6; out 25/, for 7ft, each additional foot 4/ in, 3/ out. **Towage.** A steam launch available.

SAVANNAH, U.S. Lat. 32° 1' 21" N; long. 80° 50' 33" W.

Pop. About 35,000. **Tr.**—I. Pig-iron, &c.; E. Rice, cotton, and lumber. **Accn.** On Tybee bar 19ft at LW. Sp. rise 17ft. At ST. vessels of 18 to 19ft dft. can go up to town. Graving dock 340 by 80 ft, and slip railway for vessels of 1,200 tons. **Charges.** On a barque of 606 tons, cargo in and out £83 8s 8d. **Pilotage.** According to dft. and distance. Minimum 6ft, U.S. vessels, bar pilotage, and to Cockspur £2 10s 11½d, foreign ditto £3 16s 9d; U.S. vessels from Cockspur to Savannah £1 11s 1½d, foreign ditto £2 6s 6½d; maximum 20ft, U.S. vessels bar pilotage and to Cockspur £17 11s 11½d, foreign ditto £24 16s 8½d, U.S. vessels from Cockspur to Savannah £9 18s 8½d, foreign ditto £14 17s 11½d. Detention of pilot per day 18/3. All vessels bound up or down river and detained one tide to alter the trim of the vessel pay the pilot a sum of £1 11s 8½d, but no detention for that day. **Towage.** Vessels with cargo over 300 reg. tons, per ton City to Tybee, or direct to sea 7½d; sea to City 7½d; Venus Point to City 5d; Obstructions to City 3½d; Venus Point to Tybee or direct to sea 5d; if anchored at Tybee £10 11s 5½d extra to sea. Vessels in ballast over 300 reg. tons, sea buoy or Tybee or direct to City 6d; Venus Point to City 4d; Obstructions to City 2½d; Long Island to City 5d; Tybee to sea £10 11s 5½d extra. Vessels under 300 reg. tons and over 200 each, City to Tybee, with cargo £8 9s 2d; to sea £2 2s 3½d; City to Tybee, in ballast £7 8s 0½d; Long Island to City, with cargo £7 8s 0½d; or to Obstructions £3 3s 5½d; or to Venus Point £6 6s 10½d. When a boat goes to Venus Point, or to any intermediate point, to tow a vessel out or in, and vessel does not go, £8 9s 2d. When a boat goes below Venus Point, or to Tybee, and vessel does not go, £10 11s 5½d. When a vessel under weigh stops by getting aground or from any other cause £8 9s 2d for each tide per boat above Venus Point; below £10 11s 5½d. For boats getting up steam by orders and vessel refusing to go £2 2s 3½d.

SAVONA, Italy. Lat. 44° 18' 42" N; long. 8° 9' 29" E. **Pop.**

29,000. **Tr.**—I. Coke, coal, old iron, pig-iron, grain, colonial goods, wine, clay, &c.; E. Staves, dry chestnuts, wooden hoops, oil, earthenware, &c. Depth of water 22 to 25ft inside mole; vessels drawing 22ft lie alongside quays. Cranes to

lift from 2 to 15 tons. **Charges.** On vessel of 1,000 reg. tons coal in and ballast out, about £110. Anchorage dues increased $\frac{1}{2}$ d since 1886. Savelore's charges 7d per ton of coal. **Pilotage.** For every vessel employing a pilot 11/10, besides $\frac{1}{2}$ d for each reg. ton of the vessel. **Towage.** By agreement.

SETUBAL, Portugal. Lat. $38^{\circ} 31' N$; long. $8^{\circ} 53' W$. Pop. About 25,000. Tr.—E. Oranges, lemons, grapes, corn, wine, salt, cork wood, and spirits; woven goods are not allowed to be imported into this port. Large quantities of sardines are now shipped from this port. **Accn.** In channel off bar at LW. there is 14ft at ST., NT. 15ft; at HW. 23ft to 28ft; tides rise from 8ft to 10ft. **Pilotage.** $1\frac{1}{2}$ d ton measurement up to 150 tons, every ton above that $\frac{1}{2}$ d; maximum £1 11s 3d, and minimum 8/4. Pilot receives for his services on board outside the harb. or inside the river Sado $4\frac{1}{2}$ the first day, and $3\frac{1}{4}$ day after.

SEVILLE, Spain. Lat. $37^{\circ} 10' N$; long. $6^{\circ} 10' W$. Pop. 134,000. Tr.—I. Hides, hemp, flax, iron, manufactured goods, and colonial produce; E. Manzanilla and Amon-tillado wines, lemons, oranges, wool, &c. **Accn.** The river as far as Seville is navigable for vessels drawing $13\frac{1}{2}$ ft to 15ft, and ST. 15ft. **Pilotage.** In the Guadalquivir river from Bonanza to Seville, payable on ship's gross tonnage:—From £1 17s 6d for steamers and vessels under 60 tons towed and £2 1s 8d for vessels under 60 tons sailing, to £3 15s for steamers and vessels above 800 tons towed and £4 11s 8d for vessels above 800 tons sailing. Mooring tariff payable on ship's gross tonnage, from 2/6 to 7/6. **Towage.** As per agreement, from £8 6s 8d to £10 8s 4d, not drawing more than $14\frac{1}{2}$ ft; above, from £12 10s to £14 11s 8d from San Lucar to Seville, and *vice versa*.

SHANGHAI, China. Lat. $31^{\circ} 15' N$; long. $121^{\circ} 28' E$. Pop. about 400,000. Tr.—I. Cotton and woollen manufactures, and sugar; E. Tea, silk, cotton, gold, &c. **Accn.** Vessels of 24ft dft. can ascend as far as Shanghai at ST. There are five dry docks, 325ft, 330ft, 345ft, 380ft, and 450ft respectively. Cranes to lift from 3 to 12 tons. **Charges.** On a vessel of 740 reg. tons £5 4s 9d. **Pilotage.** Gutzlaff to Shanghai, sail. ves. about 25/, s.s. 20/. Lightship to Shanghai, sail. ves. about 22/6, s.s. 20/. Wusung to Shanghai, sail. ves. about 10/, s.s. 7/6. Sea to Wusung, sail. ves. about 17/6, s.s. 15/. Same rates outward. **Towage.** On vessel of 1,199 reg. tons, coal in and ballast out, towing in and out, and from and to moorings £82 10s.

SHEDIAC, N.B. Lat. $46^{\circ} 16' N$; long. $66^{\circ} 35' W$. Pop. 1,000. Tr.—E. Lumber. **Accn.** Port, easy of access, is recognised as a harb. of refuge. Vessels can now load to 14ft or more at the wharf before moving out into the stream. Ships from 800 to 1,000 tons load inside to 18ft. **Charges.** Tonnage and light dues 1d ton. Harb. master 16/8 to 20/10. **Pilotage.** In 6/3 foot, out 3/9 foot.

SHEET HARBOUR, N.S. Lat. $44^{\circ} 47' 25'' N$; long. $62^{\circ} 32' 43'' W$. Tr.—E. Lumber. **Accn.** A perfectly safe and almost landlocked harb., and can receive vessels of any dft. **Charges.** Charges and dues on a barque of 600 tons £65 18s 9d. **Pilotage.** On a barque of 600 tons, in and out £6.

SIERRA LEONE, Africa. Lat. $8^{\circ} 29' 57''$ N; long. $13^{\circ} 14' 30''$ W. Tr.—I. Cotton goods, gunpowder, clothing, hardware, haberdashery, rum, and gin; E. Gold, ground nuts, copal, palm oil, palm nuts, ginger, hides, ivory, rice, tobacco, timber. Accn. Safe and commodious harb., with sufficient water for the largest vessels afloat. Ships of any size can lie in harb. Charges. Tonnage dues 1/, light dues 3d, harb. dues 2d reg. ton. A vessel of 230 tons d. w., drawing 11ft, cost £28 14s 9d. Pilotage. In 5/ foot, out 2/6 foot. Towage. By agreement.

SIERRA MORENA, W.I. Lat. $22^{\circ} 58' N$; long. $80^{\circ} 30' W$. Tr.—E. Molasses. Accn. Vessels of 11½ft dft. can safely enter.

SINGAPORE, Straits Settlements. Lat. $1^{\circ} 17' N$; long. $103^{\circ} 51' E$. Pop. 120,000. Tr.—E. Gambia, tin, sago, tapioca, white and black pepper, tortoiseshell, mother-of-pearl, gutta percha, nutmegs, mace, camphor, gum elastic, coffee, sapan wood, shellac, rattans. Accn. The new harb. possesses wharves and jetties. Vessels drawing 19ft to 24ft can discharge and load with ease and despatch alongside at all times. The new Albert Dock is 467ft long, 60ft wide at the entrance, and has a depth of 21ft. Four graving docks. Shear legs to lift from 5 to 45 tons. Charges. Is a free port. No tonnage or harb. dues. Pilotage. Inwards:—From Cyrene Shoal to Patent Slip and Dock Co., per foot dft. $3/1\frac{1}{2}d$; from Cyrene Shoal to any part of the new harb., or passing through new harb. to eastward $4/2$; from eastward to Tanjong Pagar $3/1\frac{1}{2}$; from any other part of new harb., or passing through new harb. as far as Cyrene Shoal, $4/2$. Outwards: From Tanjong Pagar to eastward $3/1\frac{1}{2}$; from any other part of new harb., or passing through new harb. to eastward, $4/2$; from Patent Slip and Dock Co. to westward as far as Cyrene Shoal $3/1\frac{1}{2}$; from any other part of new harb., or passing through new harb. westward as far as Cyrene Shoal, $4/2$. Between Cyrene Shoal and Sultan Shoal, to or from, half the above rates in addition, $3/1\frac{1}{2}$; from one part to another of new harb, South Channel, Penang, $3/1\frac{1}{2}$; passing through from South $4/2$; ditto North $3/1\frac{1}{2}$; vessels entering from the North are liable only to a charge for berthing of £1 os 10d; mooring and unmooring vessels when no pilotage is charged, each £1 os 10d.

SKUTSKAR, Sweden. Tr.—E. Wood goods. Accn. A safe and commodious harb. Vessels not drawing more than 24ft can load in harb. Charges. Port charges are reasonable. Pilotage. On a vessel of 222 tons reg. entering in ballast, leaving with a cargo of 107 standard deals, in £1 os 9d, out £1 10s 7½d. Towage. On a vessel of 222 reg. tons with a cargo of deals, to sea £2 2s 6d.

SLITO, Sweden. Tr.—I. Coal, imported chiefly for the use of steamers calling in; E. Timber and lime. Accn. One of the best harb. in the Baltic, with 20 to 30ft. The inner harb. can accommodate a few small vessels close to the pier in 12 to 16ft of water. Charges. On a brig 171 reg. tons £21 10s. Pilotage. On a brig of 171 tons reg. loading part of cargo at Wisby and finishing loading at Slito—at Wisby, inwards and gratuity £1; at Slito, in and out £1 1s 2½d.

SMYRNA, Turkey. Lat. $38^{\circ} 25' 40'' N$; long. $27^{\circ} 9' 10'' E$. Tr.—I. Manufactured goods, furs, grain, coals, iron, tin, cotton, coffee, copper, earthenware, &c.; E. Fruit, raw

silk, valonia, madder, roots, liquorice, carpets, cotton, wool, sponges, opium, &c. **Accn.** The principal port in the Levant; vessels can lie alongside the quays in 24ft of water at end of railway pier, and 12ft alongside it. **Charges.** On a schooner of 140 tons £50 (cargo in and out). **Pilotage.** There are no regular pilots; they are generally engaged outside by masters to assist in navigating their vessels to the entrance of the gulf; the charge for this is about £1. **Towage.** 18/ each time.

SODERHAMN, Sweden. Lat. $61^{\circ} 17' N$; long. $17^{\circ} 5' E$.

Pop. 4,000. **Tr.**—E. Iron and wood. **Accn.**

Vessels can load 16ft 4in English. **Charges.** On vessel of 500 tons £32 9s. **Pilotage.** On a steamer of 500 tons reg. coming from a foreign port in ballast, cargo out to a foreign port, in, 10ft, 16/9½; out, 17ft, £1 10s 6½d; to Prestholm, 17ft, 17/2. On a sailing vessel 300 tons reg. from foreign port in ballast, cargo out to foreign port, in, 9 ft, 14/8; out, 17 ft, £1 10s 6½d. **Towage.** On a steamer of 500 reg. tons coming from a foreign port in ballast, cargo out to foreign port, to Prestholm £2 2s 6d.

SOURABAYA, Java. Lat. $7^{\circ} 13' 8'' S$; long. $112^{\circ} 46' E$. **Pop.**

127,500. **Tr.**—I. Calicoes, canvas, glasswares, porcelain, paper, iron, petroleum, candles, &c.; E. Sugar, rice, coffee, hides, indigo, tobacco, pepper, &c. **Accn.** A basin capable of containing 20 vessels of from 100 to 800 tons. Has a dry dock 280ft long and a patent slip. One of the chief towns of Isle of Java. **Charges.** On ship of 803 tons, sugar cargo, about £35. **Pilotage.** (Not compulsory.) About £8 or £9.

SPALATO, Austria.—Lat. $43^{\circ} 30' 11'' N$; long. $16^{\circ} 26' 10''$

E. Pop. about 20,000. Principal export, wine, which is carried to France by English steamers. **Accn.** The harbour is safe, and sheltered by a breakwater. The depth varies from 13 to 25ft. There is a rising trade here, owing to the new railway.

SPEZZIA, Italy. Lat. $44^{\circ} 4' 29'' N$; long. $9^{\circ} 50' 30'' E$. **Pop.**

About 35,000. **Tr.**—I. Coal, iron, timber, flour, and hides; E. Oil, manganese ore, pig-lead, silver, grain, wine, and sandstone for paving purposes. **Accn.** Depth of water 12ft at entrance of inner harb. There are two openings on land side, E. and W., latter 200 and former 400 yds wide. Vessels usually anchor off town, in 5½ fms. A breakwater has been built 2½ miles from town across gulf. Dry dock. Crane to lift 150 tons. **Charges.** Tonnage dues 5½d ton. Sanitary dues ¾d and sailing vessels 2½d ton.

SPRANGSVIKEN, Sweden. **Tr.**—E. Deals and tar. **Accn.**

Fine harb., where vessels can load to 20ft.

Charges. On vessel of 600 tons, ballast in and cargo out £65. **Pilotage.** On a vessel of 506 tons reg., ballast in and cargo out drawing 18½ft loaded, in £2 1s 3½d; out £2 13s 11½d. **Towage.** On a vessel of 506 reg. tons, ballast in and cargo out, drawing 18½ft loaded, from Hernosand to Sprangsviken £4 10s 3½d.

ST. AMARO.—See Santos.

ST. BRIEUC, France. **Pop.** 17,833. **Tr.**—E. Butter, onions, potatoes, pitwood, and bones. **Accn.**

Suitable for vessels of 10ft draught. Springs rise 19ft, neaps 6 to 9ft. **Charges.** On vessel of 32 tons, about £1 16s.

ST. GEORGE, N.B. Lat. $45^{\circ} 6' 8'' N$; long. $66^{\circ} 54' 2'' W$.

Pop. 800. **Tr.**—E. Deals, boards, and firewood. **Accn.** Harb. well sheltered, able to accommodate about

twenty ships. Vessels moor with both anchors ahead, and two hawsers astern, made fast to wharves about 30 to 60 fms off, ships lying afloat at all times. ST. rise about 26ft, but there is not sufficient water for vessels loading alongside wharves without grounding. **Charges.** As per agreement. Expenses of a vesse loading about 6/ ton. **Pilotage.** Inwards from outside pilot station 10/5 foot, from inner station 6/3 foot; outwards is 2/1 less to outside station, but the same to inner station. **Towage.** A steamtug can be had if necessary.

ST. HELENA. Lat. $15^{\circ} 55' S$; long. $5^{\circ} 43' W$. Pop. 5,000.

Tr.—I. Sheep, cattle, beer, wines, spirits, coffee, sugar, wheat, hay, rice, coal, ironmongery; E. Wool, hides, horns, and flax. **Accn.** Vessels calling only, anchor in from 10 to 40 fms; those discharging in 10 to 15 fms. St. Helena is a free port. No graving docks or repairing slips.

ST. HELENA SOUND, U.S. Lat. $32^{\circ} 24' 34'' N$; long. $80^{\circ} 24' 39'' W$. **Tr.**—E. Phosphate rock.

Accn: Depth of water on the bar 23ft ST. and 19ft NT. Is safe only for vessels drawing 20ft at ST. and 17ft at NT. **Charges.** On a vessel of 589 reg. tons ballast in and cargo out £114 12s 4d. **Pilotage.** Bar pilotage 12/8½ foot, in and out up to 13ft, above that it appears to be increased, as a vessel drawing 13ft in and 17ft out paid altogether £31 16s 5½d. Mooring £2 2s 3½d each time. River pilotage 3/1½ foot. From Bar Buoy 2 to Port Royal or Beaufort half rates. Other pilotage varies according to dft. of water and distance, from £2 2s 3½d to £45 11s.

ST. JAGO, W.I. Lat. $19^{\circ} 57' 42'' N$; long. $75^{\circ} 54' 20'' W$.

Pop. 30,000. **Tr.**—I. Flour, corn, rice, jerked beef, cod-fish, oil, and all kinds of American provisions, coals, lumber, ice, dry goods, ironware, and all sorts of manufactured merchandise; E. Sugar, rum, molasses, coffee, cocoa, tobacco, copper-ore, wax, cotton, honey, fustic, and mahogany. **Accn.** Entrance very narrow. Area of harb. 6 miles long by 2½ miles broad; sufficient water for the largest ship, but vessels drawing more than 15ft cannot come alongside the wharf. **Pilotage.** On a British vessel entering and leaving with cargo, in and out, varies from £2 3s 9d to £4 6s 5½d. **Towage.** There is no regular steamtug, but there are steamers which undertake to tow vessels in and out at from £17 14s 2d to £21 5s each.

ST. JOHN'S, Antigua. Lat. $18^{\circ} 22' N$; long. $64^{\circ} 42' W$. Pop.

16,000. **Tr.**—I. Ale, brandy, beef, bread, bricks, butter, candles, cheese, coal, codfish, cocoa, coffee, corn, cornmeal, crackers, flour, gin, hams, hay, herrings, horses, hoops, lard, lumber, mackerel, manure, matches, mules, naval stores, oil, oatmeal, oats, onions, peas, pork, porter, potatoes, rice, salmon, salt, soap, shingles, slates, tobacco, and all manufactured goods; E. Sugar, rum, molasses, and pine apples. **Accn.** Vessels of 12ft dft. cannot come within three-quarters of a mile of the wharves, and those drawing over 14ft are obliged to lie in the roads about 1½ miles from the town. **Charges.** Port charges, harb. master's fees from 6/ for vessels under 80 tons to £1 12s for vessels over 300 tons. Rates, over 60 tons, each time 1/8 per ton. Light dues 9d per ton, landing or taking cargo, export duty; hospital dues; lighterage; ballast, &c. **Pilotage.** Inwards, under 6ft £1; 8ft £1 4s; 9ft £1 10s; 10ft £1 16s; and every foot beyond 6s. foot. Outwards three-fourths inward rates.

ST. JOHN'S, N.B. Lat. $45^{\circ} 14' 3''$ N ; long. $66^{\circ} 3' 5''$ W. Pop. 45,000. Tr.—I. British manufactures and colonial produce ; E. Timber, fish, furs, and lime. Accn. Harb. safe and always accessible. There is 18ft of water on bar at LW. ; inside anchorage off city is from 7 to 20 fms. ; alongside wharves 21 to 30ft. Tide rises NT. 18ft, ST. 28ft. **Charges.** Charges and dues on a vessel of 450 tons, ballast in and cargo of deals out, £73. **Pilotage.** On vessel of 450 tons, ballast in and cargo of deals out:—In 8ft from Seal Island outside district, £3 15s. ; shifting 13½ft out to Partridge Islands, 16/8 and £3 10s. 10d ; down the bay (not compulsory), 1d. foot extra. **Towage.** Vessel of 450 tons, ballast in and cargo of deals out, from sea (if needed) £5 4s 2d ; shifting £2 10s ; to sea £7 5s 10d.

ST. JOHN'S, Newfoundland. Lat $47^{\circ} 34' 2''$ N ; long. $52^{\circ} 40' 50''$ W. Pop. about 29,000. Tr.—E. Fish, oil, sealskins, copper ore, &c. Accn. The port has sufficient water for vessels of 30ft dft. ; Sp. rise 3ft 9in. The harb. is easy of access, and once inside is perfectly safe. There is a graving dock 500ft long, and a floating dock capable of receiving a vessel of 250 tons. **Charges.** Light and steam fog whistle dues 1-12th of a 1d ton ; this charge applies to all vessels from the U.K. Wharfage 8/4 day, 2½d ton. Labour 2/6 to 4/2. **Pilotage.** From £1 5s. on vessels under 80 tons, N.M., to £6 5s. on vessels of 700 to 800 tons, over that size 8/4 per 100 tons. Max. pilotage £10. Steamers of less than 150 horse power pay pilotage on net tonnage, above that power 5d. horse power. **Towage.** In and out of St. John's Harb., from half a mile outside the heads to the consignee's wharf, or from the consignee's wharf to half a mile outside the heads, from £1 10s for 50 tons to £16 9s for 900 to 1,000. Vessels requiring the steamers to go beyond the above limits pay the above rates additional as far as Cape Spear, and any vessel requiring towage beyond the Cape to the south, or an equal distance to the northward, is charged by special agreement. The above rates apply only to ordinary circumstances. Vessels in distress or otherwise disabled have to make special contracts for assistance. Vessels employing either of the steamers inwards will be taken outwards on their next voyage at two-thirds of above rates. Vessels using the steamer's hawser pay 10 per cent. of the towage rates for the same. In addition to above rates one-third additional will be charged during winter months—commencing on December 10 and terminating on April 10 each year.

ST. KITTS, W. Indies. Pop. 29,137. Tr.—E. Sugar, molasses, rum, and cotton. Accn. Harb. considered safe. Anchorage in 8 to 9fms. **Charges.** On vessels of 272 tons, cargo in and out, drawing 16ft, £119 14s. 2d. **Pilotage.** A pilot is not required unless vessels proceed to other ports in the island to load, when the charge is 12s. 6d.

ST. MALO, France. Lat. $48^{\circ} 40'$ N ; long. $2^{\circ} 5'$ E. Pop. of St. Malo and St. Servan 24,000. Tr.—I. Colonial produce, spices, flax, hemp ; E. Corn, fruit, wine brandy, salt, linen, cider, butter, honey, salt provisions. Accn. A tidal harb. and floating basin of 38 acres with depth of water on sill NT. 13 to 15ft, OST. 25 to 28ft., great ST. 30 to 32ft ; length of dock quays 1,450 yds. Shipbuilding is carried on. Extensive quays, built of granite, border the east and the south sides of the town of St. Malo. Cranes to lift 1 to 3 tons. **Charges.** Navi-

gation and sanitary dues same as at all other French ports. Labour $\frac{3}{4}$ per day of 12 hours. Ballast 1/1 ton. Dock gatemmen are paid 8 centimes per ton. Consignees find labourers for discharging cargo. Pilotage. $1\frac{1}{2}$ d to $2\frac{1}{2}$ d ton. Towage. $2\frac{1}{2}$ d ton, but generally by agreement. Eng. Brokers. A. Delestre, Picard, C. Thomazeau.

ST. MARY'S, U.S. Lat. $30^{\circ}40'$ N; long. $81^{\circ}28'$ W. Pop. 800. Tr.—I. General merchandise; E. Lumber. Accn. Depth of water 19 to 20ft close to the town. Vessels drawing $16\frac{1}{2}$ ft can safely cross the bar at HWST. Pilotage. On a vessel of 392 reg. tons, ballast in and cargo out, in $10\frac{1}{2}$ ft, £7 7s $10\frac{3}{4}$ d; out 15ft, £12 18s. Towage. On a vessel of 392 reg. tons, ballast in and cargo out, out £10 11s $5\frac{1}{4}$ d.

ST. MICHAEL, Azores. Pop. 81,000. Tr.—I. Coals, dry goods, hardware, coffee, tea, sugar, dyes, paints, &c.; E. Oranges, wheat, Indian corn, wines, beans, potatoes. Accn. An open roadstead with good anchorage in 15 to 30 fms. Vessels anchoring in Franquia Roads are exempt from employing a pilot. Vessels of any size can anchor safely in mole. Depth in harb. varies from 12 to 5 fms. The floating dock is $184\frac{1}{2}$ ft long and 43ft wide, and will raise a vessel weighing 1,400 tons. Cranes to lift from 10 to 11 tons. Charges.—Pilotage. Vessels of less than 200 tons, 11s; 200 to 400, 13s 4d; 400 to 800, 16s; 800 to 1,200, 17s 10d; 1,200 and upwards, £1 2s 3d. There is also a charge of 8s for pilot boat, and 4s 5d for mooring. Towage. Vessels of less than 100 tons, 3 miles, £1 6s 9d, 6 miles £1 15s 9d; 100 to 200, 3 miles £1 11s 2d, 6 miles £2 4s 7d; 200 to 300, 3 miles £1 15s 9d, 6 miles £2 9s; 300 to 400, 3 miles £2, 6 miles £2 9s 1d; 400 to 500, 3 miles £2 4s 7d, 6 miles £2 18s; 500 to 600, 3 miles £2 9s, 6 miles £3 2s 4d. Charges. On vessel of 99 tons £29 2s 8d.

ST. NAZAIRE, France. Lat. $46^{\circ}17'18''$ N; long. $2^{\circ}12'$ W. Pop. 24,000. Tr.—I. Sugar, rice, coffee, logwood, timber, guano, coal, pitch; E. Wine, brandy, sardines, eggs, butter, dried fruits, pitwood, and Paris goods. Accn. Two floating docks, three graving docks, and two shipbuilding yards. Harb. capable of admitting vessels of the largest tonnage. The roadstead abreast the town is safe, and has 4 to 7 fms at LW. Charges. Quay dues, ports in Europe $4\frac{1}{2}$ d ton, out of Europe $9\frac{1}{2}$ d ton. Sanitary dues 1d and $1\frac{1}{2}$ d respectively. Ballast $1\frac{1}{2}$ ton for sand, stone $2\frac{1}{4}$. Charges for a vessel of 580 tons about £103. Pilotage. The limits are divided into distances:—From Belle Ile to North of the Four light, La Banche, or Le Pillier, 4 distances; from North of the Four light, La Banche, or Le Pillier, to Les Charpentiers, 2 distances; from Les Charpentiers to Bonne Anse, 1 distance; from Bonne Anse to St. Nazaire Roads, 1 distance. The extreme limit of the Saint Nazaire pilotage is 1 distance, or 9 miles beyond Belle. Vessels, however, are obliged by law to receive a pilot from the first boat belonging to the station they may fall in with, no matter how far she may be from the port; but no extra pilotage can be claimed for any distance outside of the limits. Tariff, inwards, from $\frac{6}{2}$ to £1 16s per distance; outwards, from $\frac{5}{6}$ to £1 per distance, according to reg. ton. Vessels of more than 800 tons pay, in addition to the foregoing tariff, $10\frac{1}{2}$ d for every 10 reg. tons additional for the 8 distances inwards, and $10\frac{1}{2}$ d per 10 tons additional outwards. Steamers pay half pilotage. Towage.

From the dock to the roads, vessels from 150 reg. tons to 200, £2; from 201 to 300, £2 8s; from 301 to 400, £2 16s; from 401 to 500, £3 4s; for every reg. ton over 500, 2½d. St. Nazaire road to La Banche, Les Charpentiers, or Le Pillier, and *vice versa*, 150 to 200 tons £8 18s, 201 to 250, £9 18s, 251 to 300, £10 15s 2d, 301 to 350, £11 17s 6d, for every reg. ton over 350, 7d. From St. Nazaire to Paimbœuf or *vice versa* 5d, ditto Nantes ditto 1/2½, Paimbœuf ditto 1/, Pelerin ditto, 2d ton of cargo. **Eng. Brokers.** Creston, Bourdonnay du Clezio, Quirouard.

ST. PAUL DE LOANDO, W. Africa. Pop. 14,500. Good anchorage about a mile and a half from town in 7 to 14fms. **Tr.**—I. Cotton, linen and woollen goods, spirits, guns, powder, earthenware, hardware, cutlery, &c.; E. Beeswax, cotton, coffee, ivory, indiarubber, gum, oils (palm and fish), tobacco, &c. **Charges.** On vessel of 298 tons, drawing 12ft, £36 11s. 3d. **Pilotage.** Inwards, 17s. 9d.; outwards, 17s. 9d.

ST. PETERSBURG, Gulf of Finland, Russia. Lat. 59° 56' 29" N; long. 30° 13' 22" E. Pop. About 929,000. **Tr.**—I. Sugar, coffee, madder, indigo, corn, meal, dyewoods, cotton, wool, cotton stuffs, and yarns, machinery and millwork, woollen fabrics and woollen yarn, linen and linen yarn, coals, salt, iron, lead, shot, hardware, wire, spices, fruits, tobacco, &c.; E. Tallow, hemp, flax, grain, linseed, timber, copper, hides, potash, bristles, hemp seed, oil, furs, leather, fox, hare and squirrel skins, canvas and coarse linen, cordage, caviare, wax, isinglass, quilts, tar, &c. **Accn.** The channel of the new ship canal is deep enough for vessels drawing 18 to 20ft. **Charges.** On a vessel of 152 reg. tons about £22 10s. **Pilotage.** To St. Petersburg Bridge 10d foot; past the bridge 6/6. On a vessel of 152 reg. tons, in and out 1/2 foot, £2 5s. 6d. **Towage.** St. Petersburg Bridge to Customhouse £1 19s to £2 8s 9d; St. Petersburg to Cronstadt £4 17s 6d to £8 2s 6d.

ST. PIERRE ROAD, Martinique. Lat. 14° 44' 3" N; long. 61° 10' 45" W. Pop. 31,000. **Tr.**—I. Salted meat, butter, and fish; E. Sugar, rum, cassia, skins. **Accn.** Anchorage 2½ to 7 fms. Dry dock at Fort de France 400ft long, capable of receiving vessels of 28ft dft. **Charges.** Light dues about 2/6. **Pilotage.** Vessels under 150 tons 9/6½; over 351 tons 23/6. **Eng. Broker.** S. Dupouy.

ST. SERVAN, France. Pop. given with St. Malo. **Accn.** A tidal harb. and floating dock of about the same dimensions as at St. Malo, also a harb. called Port Solidor, formerly a naval station, and but little used for commercial purposes. **Charges.** Port charges and other expenses the same as St. Malo. **Pilotage.** Four recognised distances inwards:—1st, ½d reg. ton; 2nd, 1½d reg. ton; 3rd, 2d reg. ton; 4th, 2½d reg. ton. Only one rate of 2d ton outwards. On vessel of 80 reg. tons, cargo in and out, drawing 10ft, in and out £1 8s. **Towage.** As per agreement, from 1½d to 2½d ton, not compulsory. On vessel of 80 reg. tons 10ft dft., in and out £2. **Eng. Brokers.** Léger, E. Rosse.

ST. STEPHEN, N.B. Pop. 7,000. **Tr.**—I. Iron, salt, provisions, breadstuffs, sugar, molasses, tea tobacco, dry goods, &c.; E. deals, boards, timber, laths, farm produce, &c. **Accn.** Vessels of 600 tons and under load along-

side wharves. Sp. rise 26ft. **Charges.** Stevedore 3/ per standard. Wharfage a nominal sum. Provisions abundant and cheap. **Pilotage.** From 4/2 to 9/4½ foot in and out, according to dft. **Towage.** From the Ledge 3½d ton loaded and 2½d light.

ST. THOMAS'S HARBOUR, St. Thomas, W.I. Lat. 18° 19' N; long. 64° 55' W.

Pop. 12,000. **Tr.**—I. Coal, lumber, provisions, petroleum, dry goods, spirits, &c. ; E. Sugar, rum, bay water, &c. **Accn.** Vessels of largest size can lie alongside coal wharves of town. St. Thomas's Harb. is near middle of south shore of island. Shears to lift 40 tons. **Charges.** Light dues ¼d ton. Is almost a free port. **Pilotage.** To the harb.:—From 25/ day, and £1 17s 6d night, for vessels of from 10 to 12ft dft., to £5 day and £7 10s night for vessels of from 24ft to 26ft dft. From the harb.:—From 16/8 day and 25/ night for vessels of from 10 to 12ft dft., to £3 6s 8d day and £5 night for vessels of from 24ft to 26ft dft. Steamers up to 12ft to and from harb. £1 13s 4d day, and £2 10s 10d night; steamers 12ft to 16ft to and from harb. £2 1s 8d day, and £3 6s 8d night; steamers 16ft to 20ft to and from harb. £3 6s 8d day, and £5 night; steamers 20ft to 24ft to and from harb. £5 day, and £6 13s 4d night; steamers 24ft to and from harb. £6 13s 4d day, and £8 6s 8d night. Steamers running regularly half rates. **Towage.** On barque of 359 reg. tons, to sea £2 10s 10d.

ST. VALERY-EN-CAUX, France. Lat. 49° 52' N; long. 0° 33' W. **THW.** f. and c. 12h 58m.

D. HWST. 26ft; HSST 13ft. **Eng. Brokers.** A. Houdant, H. Vue.

ST. VALERY-SUR-SOMME, France. Lat. 50° 11' N; long. 2° 52' W. **THW.** f. and c. 1h 14m. **D.** HWST. 33ft; HWNT. 24ft. **Maître de Port,** De Saint-Julien.

STAVANGER, Norway. Lat. 58° 58' 15" N; long. 23° E.

Pop. About 25,000. **Tr.**—I. Grain, salt, sugar, coffee, wines, spirits, &c. ; E. Sheep, manure, herrings, anchovies, lobsters, &c. **Accn.** Harb. is good, always free from ice, and can receive the largest vessels; depth of water 5½ fms close to quay. Two graving docks 300 by 45 by 11ft, and 205 by 40 by 15ft. Crane to lift 3 tons. **Charges.** Light and custom-house dues 9½d in or out. Brokerage according to agreement. Ballast 2½d.

STETTIN, Germany. Lat. 53° 25' N; long. 14° 34' E. **Pop.** 96,600. **Tr.**—I. Coal, iron, coke, petroleum, salt, herrings, dried fish, coffee, tea, pipe-clay, wine, olive oil, sulphur, pyrites, soda, agricultural machinery; E. Grain, flour, bran, potatoes, timber, staves, zinc, spirits, sugar, cement, fire-bricks, refined and raw rape oil, molasses, rags, bones, and bricks. **Accn.** Town quay and two extensive railway quays. Floating dry dock 210 by 47 by 15ft for vessels up to 1,500 tons. Cranes to lift 20 to 60 tons. **Charges.** Very indefinite. **Pilotage.** From Swinemünde to Stettin. From 6/ for a vessel of 15 tons to 16/ for 105 tons, and 1/ additional for every 15 reg. tons additional. **Pilotage** out to and in from sea is included in the harb. dues. **Towage.** Loaded vessels from Swinemunde and Stettin 2½d; Stettin to Swinemunde, 1½d cubic metre; sea to Swinemunde 3d per 4½ cubic metres, but generally according to agreement. From the black

buoy into the harb. ships under 16 British reg. tons have to pay 9/. From Nov. 1 until March 1 the towage is raised according to the weather and other casual circumstances.

STOCKHOLM, Sweden. Lat. $59^{\circ} 20' N$; long. $18^{\circ} 03' E$.
 Pop. 131,000. Tr.—E. Timber and iron.
 Accn. Harb. has 5 to 16 fms. of water. Vessels of 24ft dft. can safely enter. Several hundred vessels can lie alongside quays. 3 graving docks 255ft, 260ft and 350ft in length respectively, and 3 patent slips. Shears to lift 50 tons. Pilotage. According to distance, varies from 17/ for 38 miles to £7 4s 5d for 72 miles. For vessels clearing outward in ballast the above charges are reduced by one-half. An extra charge of $1/7\frac{1}{2}$ is made for attestation. The winter charges, dating from Sept. 1 to April 30 are increased by 25 per cent. from the sea to the first pilot station inside the buoys. Pilots' return fares about 12/9. Vessels bound to any place on the line of passage up to Stockholm must take pilots at Landsort. Towage. The rates vary (according to distance) from £2 5s 8½d for 66 tons to £24 14s for 880 tons. This scale is increased by 25% in October, and by 50% in November. If several vessels are towed together, a reduction is made of 25%.

STRALSUND, Germany. Lat. $54^{\circ} 18' N$; long. $13^{\circ} 5' E$.
 Pop. 27,000. Tr.—I. Iron, colonial produce, wood, coal, salt ; E. Malt, timber, and corn. Accn. A safe and capacious harb., entrance narrow ; it admits vessels of 13ft dft. ; a pilot should be engaged. Charges. Expense of a vessel of 300 tons loading here £14 19s 8d.

STUBBEKIOBING, Denmark. Lat. $54^{\circ} 53' N$; long. $12^{\circ} 3' E$. Pop. 1,100. Tr.—E. Barley, corn, &c. Accn. The harb. has 12ft of water, and vessels of that dft. can lie afloat alongside a stone pier. Charges. On a vessel of 122 tons, 12ft dft. loaded £6. Port dues £5 10s. Pilotage. On vessel of 122 reg. tons ; ballast in and cargo out, 12ft dft. loaded, in and out 10/.

SUAKIN, Red Sea. Lat. $19^{\circ} 7' N$; long. $37^{\circ} 20' E$. Tr.—I. Manchester goods, iron, hardware ; E. Gum arabic, cotton, ivory. Accn. Harb. safe for largest vessels. Charges. Moderate.

SUEZ, Egypt. Lat. $29^{\circ} 58' N$; long. $32^{\circ} 10' 17'' E$. Pop. 8,000. Tr.—I. Coffee, indigo, wine, furniture ; E. Goods in transit. Accn. Tides rise, ST 7ft ; NT. 4 to 5ft. Dry dock 430ft long. Charges. Dock dues 18/ a day ; light dues about 2½d per ton up to 800 tons, and about 1½d per ton additional. Pilotage. Inwards, outer roads to dry dock 54/ ; to either basin 36/ ; from one basin to another 18/. Same out (see Index, Suez Canal).

SULINA, Roumania. Lat. $45^{\circ} 9' 6'' N$; long. $29^{\circ} 41' 37'' E$.
 Tr.—I. Spirits, cordage, beer, ironware, sugar, fruit, &c. ; E. Fish (fresh and dried), hides, wheat, cheese, caviare, maize, wool (raw), vegetables, barley, &c. Accn. The depth of water over bar always maintained at 20½ft. The depth of water in port itself is above 20½ft, so that vessels drawing 20ft can enter and leave the harbour in ordinary times. Shears to lift 15 tons. Charges. From 92 centimes per ton for a vessel of 200 tons to 1fr. 64c. per ton on a vessel over 800 tons. Pilotage. Is compulsory at the entrance. For vessels ascending the river to Ibrail, or any port below Ibrail, pilotage is optional, but for descending the river every vessel must take a licensed pilot. Masters of vessels arrange

with pilots the sum to be paid the latter for piloting their vessels up stream, and no claim for a higher rate of wage than 4/9 a day for the voyage, in addition to subsistence on board, ought to be admitted. The dues for piloting a vessel down stream are included in the port charges levied by the European Commission of the Danube. **Towage.** By agreement, from £2 to £10 according to size of vessel.

SUNDSVALL, Sweden. Lat. 62° 21' N ; long. 17° 20' E. Pop. 6,000. **Tr.**—I. Colonial produce, salt, brandy, coal, coke, corn, wine, canvas, cordage, &c. ; E. Timber, deals, battens, boards, ores, spars, iron, tar, &c. **Accn.** The largest ships can enter. **Pilotage.** To Sundsvall or any of the sub-ports, about 2/8 per foot in and out. Moving in harb. 5/3⁴. **Towage.** As per agreement.

SUSA, Tunis. Lat. 35° 49' N ; long. 10° 39' E. Pop. 10,000. **Tr.**—I. Manchester cotton goods, building materials, and colonial produce ; E. Olive oil, esparto fibre, and grain. **Accn.** Anchorage about 2 or 3 cable-lengths off, in 4½ to 5 fms. **Charges.** Port charges, 2d. ton up to 500 tons. On vessels of 143 tons, £3 7s. 6d.

SVENDBORG, Denmark. Lat. 55° 03' N ; long. 10° 38' W. Pop. About 6,000. **Accn.** Usually 14ft of water in the harb. Svendborg is situated on the S. coast of the island of Fyen. **Charges.** Harb. dues about 1½d per ton. Vessels in ballast pay no harb. dues. Custom-house charges 6d reg. ton. **Pilotage.** 6½d foot in and out.

SWAN RIVER, Western Australia, which includes Gage Road, Owen Anchorage, and Cockburn Sound. Lat. 32° 3' 18" S ; long. 115° 45' 30" E. **Tr.**—E. Sandal wood, copper and lead ores, wool, pearl, oyster shells, timber, manna, gum, horses, cows, sheep. **Accn.** The river itself can only admit small craft of about 4ft dft. ; Cockburn Sound is a spacious harb., and affords secure anchorage in 5 to 12 fms ; vessels over 16ft dft. are not allowed in Owen anchorage ; Gage Road is the nearest anchorage to the river ; vessels anchor in 6 to 12 fms, about two or three miles from the mainland. **Charges.** Harb. dues £2 5s to £7 4s for under 8ft or upwards of 18ft. Light and tonnage dues are chargeable with various exemptions. Vessels arriving in ballast and loading colonial timber free of all charges. Vessels putting in for repairs or supplies only, pay light dues. Lighterage from 5/ to 7/ ton. **Pilotage.** Into or out of Gage Road or Owen Anchorage, by passing N. or S. of Rottnest Island and N. of the Stragglers £2 10s, with increasing rate to £11 for vessels drawing under 8ft to 23ft and upwards. Into or out of Gage Road (vessels over 16ft dft. are not now allowed in Owen Anchorage), Owen Anchorage, or Cockburn Sound, by any channel S. of the Stragglers, £3 10s to £8 9s for vessels drawing under 8ft to under 19ft.

SWATOW, Ohina. Lat. 23° 21' N ; long. 116° 40' E. Pop. 60,000. **Tr.**—I. Opium, piece goods, bean cake, peas, and beans, the last three items from Newchwang and Chefoo, cereals from the Yangtze ports and Bangkok ; E. Sugar, paper, tea, tobacco, and sundry miscellaneous articles, including grass cloth, earthenware, fruit, and Chinese provisions. There is a large emigration to Bangkok and the Straits Settlements. **Accn.** Vessels

of 13ft to 14ft dft. can enter at any time in fine weather. Tides rise 8ft. and 9ft. **Charges.** See Canton. **Pilotage.** 12/6 foot, not compulsory, but advisable.

SWINEMUNDE, Germany. Lat. $53^{\circ} 55' N$; long. $14^{\circ} 16' E$. **Pop.** About 8,000. **Accn.** The fairway is from 360 to 492ft wide. 23ft of water at the entrance of the harb. This is one of the best ports in the Baltic. **Charges.** With coals or-in ballast $1\frac{1}{8}$ öre per reg. ton.; with general cargo $3\frac{1}{8}$ öre per reg. ton. **Labourage** 17m a keel of 7 Prussian lasts. **Pilotage.** See Stettin. **Towage.** See Stettin.

SYDNEY.—See Port Jackson.

SYRA, Greece. Lat. $37^{\circ} 03' N$; long. $15^{\circ} 15' E$. **Pop.** About 35,000. **Tr.**—I. Syra is the chief emporium of the trade in the Greek Archipelago; large quantities of colonial manufactured goods are imported chiefly from England, not only for sale to purchasers who frequent this market from all parts of Greece and Turkey, but also for retranshipment thereto; large quantities of grain and hides are also imported; E. The only produce grown in the island is fresh vegetables. Syra, however, serves as a medium for shipment to Europe of the well-known Naxos emery-stone and citrons; sponges from the islands of Sporades, Nauplia tobacco, Zea and Marathonisi valonia, and other produce from the mainland, leather manufactured at the local tanneries, and flour prepared at the local flour mills, form important items of export. **Accn.** The depth of water in the harb. varies from 3 to 7 fms. A slip for vessels up to 700 tons, and another in course of construction for vessels up to 2,000 tons. **Charges.** Since July 1/13, 1887, the port and light dues have been increased to 25c. for discharging only, and for loading and discharging 35c. per ton. Breakwater dues 10c. per ton. Health dues 2c. per ton. Vessels calling for provisions and coals, or from stress of weather, pay breakwater and health dues only, but if they remain longer than 48 hours are charged 15c. per ton. Ballast, about £10 per 100 tons.

SYRACUSE, Italy. Lat. $37^{\circ} 3' N$; long. $15^{\circ} 18' 24'' E$. **Pop.** 23,200. **Tr.**—E. Wine, grain, oranges, and lemons. **Accn.** Can admit vessels of any size, and is one of the finest harb. in the Mediterranean. **Pilotage.** Inwards:—from 11/10½ for vessels up to 50 reg. tons, to £2 5s 1d for vessels of 301 reg. tons and upwards. Outwards by agreement.

TACOMA, U.S. Lat. $47^{\circ} 30' N$; long. $122^{\circ} 30' W$. On the E. side of Puget Sound. **Pop.** 4,000. **Tr.**—I. General merchandise, iron, and manufactured goods; E. Lumber, hops, grain, coal, &c. **Accn.** Safe harbour, completely protected by high lands from all winds, considerable anchorage ground and spacious wharves with nearly 30ft LW, and rise of tide 16ft. **Charges.** Discharging ballast 1/3 to 1/8 ton. Stevedoring charges and labour about the same as San Francisco. No dock charges. **Towage.** To sea, from £41 13s 4d for vessels of 400 to 500 tons; to £62 10s for vessels of 1,600 tons to 2,000 tons. To Race Rocks, from £31 5s to £52 1s 8d. To Dungeness, from £26 0s 10d to £46 17s 6d. To Port Townsend, from £20 16s 8d to £41 13s 4d respectively. Hawsers' rates for all vessels to sea £4 3s 4d; to Port Townsend £2 1s 8d.

TAGANROG, Russia. Lat. $47^{\circ} 12' 48'' N$; long. $38^{\circ} 29' E$. **Pop.** 50,000. **Tr.**—I. Dried fruits, oil, wine, coffee, tobacco, liquors, woollen goods, fresh fruits, nuts,

cement, manufactured iron, and jute sacking; E. Wheat, rye, barley, linseed, rape seed, tallow, maize, oats, caviare, maccaroni, wool, butter, and oilcake. **Accn.** There is no regular port. Usual anchorage ground 18 to 20ft, and from 5 to 6ft at loading pier. **Pilotage.** A charge of about 11/ per ship is always made by the Custom-house at Kertch for pilotage through the Straits on every vessel proceeding into the Azof, whether a pilot is taken or not. £6 to £12 up and down (optional and matter of agreement).

TALCAHUANO.—See Concepcion Bay.

TALTAL, Chili. Lat. $25^{\circ} 24' 55''$ S; long. $70^{\circ} 35' 10''$ W. **Tr.**—E. Nitrates and ores. **Accn.** Ships can moor within half a cable's length of the mole in 5 fms of water; sand bottom. The harb. is one of the best in Chili. **Pilotage.** On a barque of 399 reg. tons, at Caldera mooring and unmooring about £5.

TAMATAVE, Madagascar. Lat. $18^{\circ} 10'$ S; long. $49^{\circ} 32'$ E. **Pop.** 8,000. **Tr.**—I. Cotton cloths, wearing apparel, hardware, provisions, beer and spirituous liquors, oil, chairs, &c.; E. Oxen, cows, swine, poultry, hides, rice, tobacco, specie, straw and basket wares, gum, wax in large quantities. **Accn.** Has a commodious harb. with safe anchorage during eight months of the year, from April to November. **Charges.** No tonnage, light, or other dues imposed.

TANGIERS, Morocco. Lat. $35^{\circ} 47'$ N; long. $5^{\circ} 50'$ W. **Pop.** About 20,000. **Tr.**—I. Alum, brass and copper, cloth, candles, cochineal, coffee, cotton goods, deals, china earthenware, glass, hardware, indigo, iron, lead, paper, rice, silk, spices, steel, sugar, and tea; E. Beans, canary and cinnamon seeds, dates, eggs, fowls, goat skins, gums, hides, leeches, maize, olive oil, oranges, ostrich feathers, oxen, peas, sashes, slippers, wax, &c. The export of wheat and barley is prohibited. **Accn.** Anchorage about a mile from town. Has sufficient water for largest vessels. **Charges.** Anchorage, about 150 tons, about 16s; lighterage, lighter of 5 tons, 16s; sanitary fees, above 150 tons, 6s. There is also a fee of 1s 6d payable by way of gratuity to the port officials.

TARANTO, Italy. Lat. $40^{\circ} 29'$ N; long. $17^{\circ} 12'$ E. **Pop.** 28,000. **Tr.**—E. Oil, fruits, cotton, wheat, oats. **Accn.** 5 fms water close to town. Vessels drawing 18ft can enter Mare Grande, where they are well sheltered. **Charges.** On a vessel of 100 tons reg., anchorage dues £4. **Pilotage** (optional) £2 4s 6d. on 100 tons; mooring and unmooring (optional) £2 8s.

TARRAGONA. Lat. $41^{\circ} 7'$ N; long. $1^{\circ} 16'$ E. **Pop.** 19,000. **Tr.**—I. Fish, coals, grain, spirits, staves, &c.; E. Nuts, almonds, wine, brandy, and oil. **Accn.** Harb. has 5 fms inside port; a buoy is laid down inside the harb. in 18ft of water. **Charges.** On a steamer with 1,500 tons of coal £252 6s 9d. **Pilotage.** On a vessel of 100 tons reg., cargo in of 170 tons coal, and out of 200 pipes for England, harb. pilot and mooring in and out £1 5s 8d. On a steamer discharging 1,500 tons coal, inwards and boat £7 7s 6d; outwards £5 7s 11d.

TERCEIRA, Azores. Lat. $38^{\circ} 38' 33''$ N; long. $27^{\circ} 12' 33''$ W. **Pop.** 15,000. **Tr.**—I. Manufactured goods, iron, and provisions; E. Oranges, wheat, maize, &c. **Accn.** Depth from 7 to 30 fms. **Charges.** Port charges on a vessel in ballast, about £5, a little more if laden; mooring 12/6. Labour 2/6 per man per day. Ballast, stone 1/6 per ton alongside; sand 1/2 per ton.

TERNEUSEN, Holland. (At mouth of the Canal to Ghent.)

Lat. $51^{\circ} 21' N$; long. $3^{\circ} 48' E$. Tr.—I. Pig-iron, iron ore, copals; E. Rails, manufactured iron, zinc, &c. Accn. Tidal harb. Ships drawing 18ft can come here at ST., and 15 or 16ft at NT. Sp. rise 15ft, and N. rise 11ft. The canal is capable of receiving vessels of 2,700 tons, and has locks 39ft wide. Cranes to lift 1 to 2 tons. Pilotage. See Ghent. Eng. Broker. Ysselstein.

THORSHAVEN, Faroe Isles. Pop. About 1,600. Tr.—I.

Corn, pulse, bread, malt, iron, spirits, colonial produce, lead, gunpowder, lime, bricks, timber, tar, glass, linen cloth, shoes; E. Hose, tallow, fish, train oil, feathers, skins, and butter. Accn. Plenty of water in the harb., which, however, is not very commodious. Thorshaven, the principal port of the group, is on the SE. end of the Island of Stromoe. Charges. For discharging or loading cargo at any ports of the Faroe Isles $2\frac{1}{2}$ ton.

THREE RIVERS, Canada. Lat. $46^{\circ} 22' N$; long. $72^{\circ} 31' W$.

Pop. 10,000. Tr.—I. Coal and rails; E. Lumber, phosphate, and furs. Accn. Large and commodious harb., 14 to 36ft of water at wharves. Charges. Harb. dues $1\frac{1}{2}d$ per ton on ships, steamers a quarter of that, every 24 hours. Pilotage. $6\frac{1}{3}$ per ft to and from Quebec (78 miles).

TIEN-TSIN China. Lat. $39^{\circ} 3' 55'' N$; long. $117^{\circ} 3' 55'' E$.

Pop. 950,000. Accn. There is a bar 5 miles outside Taku with from 12 to 16ft of water at spring tides, and 9 to 12 at neaps. Vessels drawing too much to cross the bar lighten outside. Charges. Tonnage dues 2s ton. Pilotage. From outside bar to inner anchorage at Taku: Sailing vessels $\pounds 1$ os 10d ft; steamers or vessels in tow, 16s 8d. From inner anchorage at Taku to Tien-Tsin: Sailing vessels $\pounds 1$ os 10d; steamers 16s 8d.

TOBAGO, W. Indies. Pop. 19,075. Vessels generally

anchor off Scarborough in about 9 or 10 fms. Anchorage exposed to long ground swell. Charges. Tonnage dues $\frac{3}{4}d$ per ton. Wharfage. 6d ton. Pilotage. On vessel of 257 tons, $\pounds 1$ 15s.

TOCOPILLA, Bolivia. Lat. $22^{\circ} 13' S$. Pop. 3,500. Tr.

—E. Copper ore, &c. Tocopilla was declared an open port by the Bolivian Government in May, 1871. The anchorage, which is in about 15 fathoms, is open to the Pacific and subject to a heavy swell. Vessels are discharged and loaded by means of lighters. Charges. Same as at Valparaiso.

TOME.—See Concepcion Bay.**TONSBERG, Norway.** Lat. $59^{\circ} 15' N$; long. $10^{\circ} 25' E$.

Tr.—I. Coal, and ships' stores, iron, grain, &c. E. Wood, timber, seal oil, &c. Accn. Depth of water 18ft in harb.; vessels drawing 14ft can easily enter. Charges. Harb. dues $10\frac{1}{2}d$ on cargo in or out. Discharging coals 4d ton, iron 5d. Port dues and expenses of vessel 290 tons $\pounds 26$. Pilotage. On a vessels of 300 tons, in $48\frac{1}{9}$; out $29\frac{1}{3}$. Towage. On a vessel of 250 tons with rails in and ballast out $\pounds 4$ 6s 8d.

TORRE-ANNUNZIATA, Italy. Accn. Excellent modern

port, with spacious entrance between two moles; vessels of 23ft dft. can safely enter. Tr.—I. Coal and grain in large quantities. Charges, Pilotage, &c., see Naples.

TOULON, France. Lat. $43^{\circ} 7' 21''$ N; long. $5^{\circ} 55' 37''$ E. Pop. About 90,000. Tr.—I. Grain, wood, coal, hemp, and salt provisions; E. Wine, salt, oil, capers, figs, raisins, almonds, oranges, cloth, hosiery, soap. Accn. This port has a fine harb and roadstead, with 6 or 7 fms of water in the Little Road opposite the town. Toulon is the principal station of the French navy in the Mediterranean. There are eight graving docks, ranging from 243ft to 535ft in length. Charges. Tonnage dues $9\frac{1}{2}$ d reg. ton. Ballast $1/9\frac{1}{2}$ ton. Brokerage 3d ton for sailing vessels, 4d ton for steamers. Pilotage. On vessel of 100 reg. tons with cargo, in and out £2 7s 6d. Eng. Brokers. Bernard, Martel.

TOWNSVILLE, Queensland. Lat. $19^{\circ} 15'$ S; long. $146^{\circ} 49'$ E. Pop. 11,500. Accn. Good anchorage two miles from wharves; Government pier being constructed which will enable ships to discharge alongside. Cranes to lift 15 tons. Pilotage. 4d. per ton in, same out.

TRAPANI, Italy. Lat. $38^{\circ} 0' 40''$ N; long. $12^{\circ} 30' 16''$ E. Pop. 30,000. Tr.—E. Salt, sulphur, ore, soda, oil, and wine. Accn. Plenty of water for vessels of 20ft dft. Trapani is on the W. coast of Sicily.

TRAVEMUNDE, Germany. Lat. $54^{\circ} 00'$ N; long. $10^{\circ} 53'$ E. Tr.—Same as Lubeck. Accn. Depth of water on the bar $17\frac{1}{2}$ ft. Vessels able to cross the bar can lie alongside the pier; vessels drawing 12ft can ascend as far as Lubeck. Charges. Vessels entering this harb. on account of distress are exempt from dues, but no trade can be carried on during their stay. Charges about the same as Lubeck. Pilotage. See Lubeck. Towage. See Lubeck.

TREBIZOND, Black Sea. Lat. $41^{\circ} 1'$ N; long. $39^{\circ} 45' 48''$ E. Pop. 40,000. Tr.—I. Cotton and woollen goods, hardware and tinplates, provisions; E. Silk, raisins, tobacco, cereals, wool. Accn. Good anchorage in 4 to 6 fms. Charges. Moderate. Pilotage. 4/ to harb. master.

TREGUIER, France. Lat. $48^{\circ} 47'$ N; long. $3^{\circ} 14'$ W. Pop. About 4,000. Tr.—I. Fruits, tobacco, linseed, salt, cider, grain; E. Flour, alcohol, oysters, &c. Accn. There are 12ft of water close to the quays. Charges. Port charges of a vessel of 250 tons £38 19s. Pilotage. On brig 175 reg. tons, cargo in, drawing $10\frac{1}{2}$ ft, ballast out:—to the sea £1 5s 4d; across the bar inwards £1 15s 10d; out £2 0s 9d. Eng. Brokers. Gaic & Le Milier, Lemarre.

TRELLEBORG, Sweden. Tr.—I. Coals, &c.; E. Barley, &c. Accn. Vessels of 15 ft can load alongside the piers and quays. Charges. On vessel of 104 reg. tons £10 7s. Pilotage. On a vessel of 104 reg. tons, ballast inwards, and cargo of barley outwards, in $6/4\frac{1}{2}$, out 10/11. On a vessel of 112.56 tons reg., with cargo of coals in and barley out, in and out, 12/6 $\frac{1}{2}$. Towage. About 2d reg. ton during winter months, and about 1 $\frac{1}{2}$ d during summer. Tugboats always ready.

TREPORT, France. Eng. Brokers. Coquais, Gelée.

TRIESTE, Austria. Lat. $45^{\circ} 38' 49''$ N; long. $13^{\circ} 46' 15''$ E. Pop. 155,000. Tr.—I. Cotton, tobacco, coffee, fish, petroleum, iron, chemicals, and coals; E. Corn, wine, oil, wool, skins, metals, staves, timber, marble, sugar, fruit, &c. Accn. Two ports: the old port and the new port, which is to be

enlarged at the expense of the old one, with accn. for a considerable number of vessels of any size. Inside the old harb. is the "canal," accessible to vessels not drawing more than 14ft. Trieste is the principal seaport city of the Austrian Empire, and was a free port till the end of 1889: goods have to pay duty if not deposited in the bonded warehouses. A graving dock for vessels up to 4,000 tons, another for vessels of 3,500 tons, and a slip for vessels up to 1,200 tons. **Charges.** 101 to 150 tons 3d per ton, 151 to 200 tons 4d, 201 to 300 tons 5d, 301 to 400 tons 6d, 401 tons and upwards 7½d per ton. On touching other Austro-Hungarian ports and continuing the same operation (loading and unloading only) from 1 to 4 farthings per ton according to size. The canal dues are ½d per ton over the above tariff. Expenses of a steamer of 1,000 tons about £65. **Pilotage.** £3 is a fair arrangement from Rovigno, and £1 to £1 4s if taken a few miles from the roads. For watching 4' day each pilot, and the same per night. No duty for shifting. **Towage.** There are no regular steamtugs, but the several steamboats employed in short trips between Trieste and the small towns of the neighbourhood render very useful services for a reasonable rate, viz.:—£2 to £2 10s for about 3 miles, and less in proportion: £1 4s to £1 10s for a shifting within the roads and the ports.

TRINCOMALIE, Ceylon. Lat. 8° 33' 30" N; long. 81° 13' 10" E. Pop. 21,000. Accn. The largest ships can lie alongside wharf; the merchant anchorage is in 4 to 8 fms of water, about 4 cable lengths from the wharf. **Charges.** Tonnage dues see Colombo. **Pilotage.** Rates payable by all square-rigged vessels, sloops or schooners:—Vessels of 600 tons and upwards, Back Bay, £2; inner harb. £4. Vessels of 400 tons and under 600, Back Bay, £1 10; inner harb. £3. Vessels of 200 tons and under 400, Back Bay, £1 1s; inner harb. £2 2s. Vessels of 100 tons and under 200, Back Bay, 10/6; inner harb. £1 1s. The above rates are charged on all vessels going into the inner harb., whether they make a signal for a pilot or not. In Back Bay the charge is only made if the pilot goes on board.

TRIPOLI, Barbary, Africa. Lat. 32° 55' N; long. 13° 10' E. Pop. About 16,000. Tr.—I. Iron, lead, timber, steel, glass, cutlery, earthenware, alum, vitriol, sugar, coffee, tea, cinnamon, spirits, wines, salt fish, firearms, and British and foreign manufactured goods; E. Wheat, barley, oil, wool, butter, dates, madder, cattle. Accn. Vessels of 18ft dft. can safely enter. **Pilotage.** 30/ each way.

TRIPOLI, Syria. Lat. 34° 24' 6" N; long. 35° 49' 15" E. Pop. 25,000. Tr.—E. Silk, wool, cotton, tobacco, galls, cochineal, soap, oranges, lemons, and sesame. Accn. Good anchorage in 3 to 7 fms. **Charges.** On vessel of 249 tons, £3 17s 6d.

TROCADERO, Spain. Tr.—Trocadero is the principal port of shipment of sherry wine. Accn. 5 fms at L.W. at the end of the Britannia Pier; vessels of 1,000 tons can lie alongside the wharf and take in cargo. **Charges.** Tonnage dues for cargo from America 2/8 to 3/4; Europe 1/4 to 1/8. **Pilotage.** See Cadiz.

TROMSO, Norway. Lat. 69° 40' N; long. 18° 55' E. Tr.—I. Corn and colonial produce, coals, and salt; E. All kinds of dried fish, cod oil, seal oil, hides, &c. Accn. The

harb. is safe, and there is anchorage all over the Sound for vessels of any size. **Charges.** Harb. master's dues $\frac{4}{4}$ for every vessel. Light dues $\frac{4}{4}$ d ton.

TROUVILLE, France. (S. side Mouth of the Seine.) Lat. $49^{\circ} 22'$ N ; long. $0^{\circ} 04'$ E. Pop. 6,000. Tr.—I. Coal, cement, wood, pig-iron, oats, and ice ; E. Corn, barley, wheat, seed, pit-props and iron ore. Accn. Harb. and floating dock. The harb. can be entered by vessels of 12ft dft. at lowest NT. A new channel with a maximum depth of 16ft at ST. has been dug at the entrance. Besides the wet dock now in use important works have been undertaken since October, 1889. They include a spacious basin, with scouring pipes connected with river ; half tide dock communicating with latter ; and dock now in service, and fitted to scour the channel between piers. The completion of these works will ensure a depth of 18 to 20ft. The dock has an average depth of 17ft. Cranes to lift from 3 tons. **Charges.** On a vessel of 200 reg. tons £19. Port dues same as Honfleur, with the exception of the harb. dues of $\frac{4}{4}$ d. **Pilotage.** The large roadstead is three miles off, rate $\frac{2}{4}$ d ton ; to the smaller roads one-fourth less. Steamers pay one-half inwards and two-thirds outwards. Loaded sailing vessels also two-thirds. Ships loaded from other ports than those of the United Kingdom and European possessions pay one-half besides above rates. On a brig of 300 reg. tons (carrying 500 tons dead weight), cargo in and ballast out, drawing 15ft loaded, and also on a steamer of 453 reg. tons (790 tons dead weight), in, brig £3 2s 5d ; steamer £2 7s 2d ; out, brig £1 11s 2d ; steamer £1 11s 6d. **Eng. Brokers.** J. Greenhalgh, and Geo. Lefebvre.

TUNIS, Africa. Lat. $36^{\circ} 48' 36''$ N ; long. $10^{\circ} 18' 37''$ E. Pop. About 100,000. Tr.—I. Woollens, coarse German linens, cotton stuffs, hardware, sugar, coffee, spices, tin-plates, gunpowder, lead, alum, dye stuffs, wine, silk, Spanish wool, &c. ; E. Hides, wax, morocco leather, sponges, coral, dates, corn, olive oil, woollen skull caps, &c. Accn. Vessels discharge and load in the roadstead in 3 to 5 fms.

TVEDESTRAND, Norway. Lat. $58^{\circ} 37\frac{1}{2}'$ N ; long. $8^{\circ} 56'$ E. Tr.—I. Coals, coke, and iron ; E. Timber, deals, battens, boards, and ice. Accn. Sufficient water for all-sized vessels. A pilot is necessary to enter. **Charges.** On a vessel of 233 tons of 13ft dft. £22 17s. **Pilotage.** On a vessel of 233 reg. tons with cargo in and out, 13ft dft., in, summer rate £1 6s 6d ; out, summer rate 16/.

TWILLINGATE, Newfoundland. Lat. $49^{\circ} 43'$ N ; long. $54^{\circ} 45'$ W. Tr.—I. Salt, biscuits, butter, dry goods, flour, pork ; E. Codfish, seals, pickled salmon, preserved lobsters, seal oil, skins and furs. Accn. The outer part of the harb. is deep, but upper part shallow ; the best anchorage is on N. side, in 5 fms. The harb. is safe, except when it blows from the NE. **Charges.** Light dues 1/ ton for 12 months. Labour about 3/ day. Ballast $\frac{2}{6}$ ton. **Pilotage.** By agreement with fishermen, about 2/ foot.

UDDEWALLA, Sweden. Lat. $58^{\circ} 20'$ N ; long. $11^{\circ} 54'$ E. Pop. 5,700. Tr.—I. Coal and salt ; E. Oats, boards, deals, battens, and pit props. Accn. Harb. has 18ft. of water on bar, and 15 to 16ft inside. **Pilotage.** For the first 12ft 18/, and $\frac{9}{4}$ d for each additional foot.

ULEABORG, Russia. Lat. $65^{\circ} 00' N$; long. $25^{\circ} 40' E$.
 Pop. 12,000. Tr.—I. Colonial produce, coals, salt, &c.; E. Barrels of tar, pitch, deals, timber, fish, and boards. Accn. There are only 10ft in inner harb. Charges. Vessels of 200 tons about £15 10s. Pilotage. On a vessel of 200 tons entering in ballast and clearing out with cargo, in 10ft dft. £3; out, 13ft dft. £3 10s 6d.

UMEA, Sweden. Lat. $63^{\circ} 49' N$; long. $20^{\circ} 18' E$. Pop. 2,200. Tr.—I. Little or nothing, occasionally a cargo of salt; E. Deals, battens, boards, timber, and dried fish. Accn. Has a good harb., where vessels can load to 21ft. Pilotage. On a vessel of 157 tons reg., ballast in and cargo out, in £1 3s 10½d, out £1 2s 3½d.

VALENCIA, Spain. Lat. $39^{\circ} 28' N$; long. $0^{\circ} 19' W$. Pop. 160,000. Tr.—I. Provisions, guano, petroleum, coal, iron, &c.; E. Olives, oil, wine, tiles, and fruit. Accn. Harb. gives shelter to vessels drawing 23ft of water; ships of 23ft dft. can anchor alongside wharves stern on. Charges. Vary very much. Pilotage. In or out. From 8/4 per ton for vessels under 100 tons to £1 5s per ton for vessels of 2,000 tons and upwards. Mooring, from 4/2 to 12/6 ton. These dues are payable on the gross reg. tons. From sunset to sunrise these charges are doubled.

VALPARAISO, Chili. Lat. $33^{\circ} 1' 53'' S$; long. $71^{\circ} 38' W$. Pop. 102,000. Tr.—I. Manufactured goods, machinery, iron, coal, lumber, petroleum, &c.; E. wheat, flour, copper ore, hides, wool, tallow, &c. Accn. The bay is well sheltered except towards the north, and during winds from this quarter in the winter season shipping is much exposed, although with good moorings there is no danger. There are two large floating docks, capable of receiving vessels of 3,000 tons, and a large wharf. Large vessels anchor in 10 to 25 fms, on good-holding muddy ground. Two floating dry docks, 300 by 60 by 21ft, and 265 by 15 by 16ft. Cranes to lift to 45 tons. Charges. Hospital dues 2½d per reg. ton, light and tonnage dues 5d. Pilotage. From 15/ for vessels of 100 to 200 tons to £2 14s for vessels of 1,000 to 1,200 tons and over, besides 14/ for boat hire. Towage. Steamtugs usually assist in mooring and unmooring; their charge is 5d reg. ton for each operation. These tugs may also be employed by vessels wishing to be towed from or to sea, the cost of such services ranging from £4 3s 4d to £8 6s 8d, according to size of vessel.

VANCOUVER, British Columbia. Lat. $49^{\circ} 18' N$; long. $123^{\circ} 7' W$. Accn. Depth of from 23ft to 26ft close by wharf 1,000ft long. Charges. No port charges. Towage. Minimum, vessels under 500 tons £72 18s 4d; maximum, over 1200 tons £125.

VARNA, Bulgaria. Lat. $43^{\circ} 12' 0'' N$; long. $27^{\circ} 57' 16'' E$. Pop. 24,555. Tr.—I. Manufactured goods, colonial produce, oil, pig-iron, coal, &c.; E. Grain, tallow, hides, cheese, dried beef, and wool. Accn. Anchorage in 8 to 10 fms. Charges. On vessel of 434 tons, £17 3s.

VEFSEN, Norway. Lat. $65^{\circ} 56' N$; long. $13^{\circ} E$. Tr.—E. Deals and boards. Accn. There is sufficient depth of water for largest ships, but vessels visiting this port should be well provided with cables. Charges. On vessel 380 tons about

£33. **Pilotage.** On a barque of 250 reg. tons, ballast in, timber out, inwards from Villa £7; outwards to Villa £7 12s. Pilots from Villa have to stay on board four days without extra pay, after that 2/3 day. **Towage.** Steamers passing north and south every week can be had for towage.

VENICE, Italy. Lat. $45^{\circ} 26' N$; long. $12^{\circ} 20' E$. **Pop.** About 124,000. **Tr.—I.** Sugar, coffee, cotton, and woollen fabrics, cotton yarn and raw cotton, hardware goods, dye stuffs, salted fish, and grain. **Accn.** Vessels drawing 23ft can reach Venice.

VERA CRUZ, Mexico. Lat. $19^{\circ} 11' 30'' N$; long. $97^{\circ} 8' W$. **Pop.** About 16,000. **Tr.—I.** Woven fabrics, wax, hardware, cutlery, paper, brandy, wines, metals, earthenware, and quicksilver; E. Bullion, cochineal, sugar, flour, drugs, indigo, pimento, provisions, sarsaparilla, leather, vermill, logwood, and coffee. **Accn.** The harb. is not adapted for vessels drawing over 18½ft. **Pilotage.** 10/5 foot. **Towage.** 4/6 per foot.

VICTOR HARBOUR, South Australia.—See Port Elliott, Victor, and Rosetta Harbours.

VICTORIA HARBOUR (73 miles E. of Esquimaux) **Brit. Col.** Lat. $46^{\circ} 30' N$; long. $123^{\circ} 20' W$.

Pop. 8,000. **Tr.—I.** General merchandise of every description; E. Lumber, coal, fish, furs, oil, skins, wool, and gold. **Accn.** There are wharves alongside which vessels of 16ft dft. can lie at LWST. It is only accessible to vessels of 15ft dft., although those of 18ft dft. can enter at the top of ST. A graving dock 430 by 95 by 26½ft.

VICTORIA HARBOUR, W. Coast of Africa. **Tr.—I.** Piece goods, machinery, rice, birds' nests, and specie; E. Sago, coal, timber, and cattle. **Accn.** Vessels drawing 14ft can lie alongside most of the small jetties which are private property. **Pilotage.** 5/ foot.

VILLA REAL DE SAN ANTONIO, Portugal. **Accn.** At LST. there are only about 6ft of water on bar; springs rise 12ft. **Pilotage.** Vessels under 132 tons 1½d ton, and ¾d for each additional ton above 132, provided always that the pilotage on any vessel shall in no case exceed £12 3s 4d, or be less than ¾. River pilotage 5/ for the first day, and 2/6 day after. **Towage.** Between Villa Real and Pomeroy 3d reg. ton each way.

VOLO, Greece. Lat. $39^{\circ} 21' N$; long. $22^{\circ} 58' E$. **Pop.** 7,000. **Tr.—I.** Iron, tin, coffee, refined sugar, spice, rice, leather, hides and skins, cotton and woollen goods, earthen and glass ware, and cutlery; E. Wheat, rye, barley, Indian corn, sesame seed, wool, silk, tobacco, cotton, &c. **Accn.** The harb. is safe and well sheltered, with anchorage in 5 to 12 fms.

WALDEMARSVIK, Sweden. Lat. $58^{\circ} 12' N$; long. $16^{\circ} 37' E$. **Tr.—E.** Oats, pit props, timber, and pig-iron. **Accn.** Safe harb. for vessels of 14ft dft. **Charges.** On a 273 ton vessel, dft. say 12ft, about £19 5s. **Pilotage.** On a steamer of 273 reg. tons, ballast in and cargo out, 9ft dft. in, 13ft out:—In, £1 18s 7d; out, £2 8s 10½d.

WALLAROO, South Australia. Lat. $33^{\circ} 55' 49'' S$; long. $137^{\circ} 37' 30'' E$. **Pop.** 3,000. **Tr.—E.** Copper. **Accn.** Vessels of any dft., say up to 24ft, can ride in the bay in perfect safety. There is a jetty 800ft long, with 16ft water at outer

end, erected by a private company. **Charges.** Ballast alongside 3/ ton, discharging alongside 1/9 ton. Light dues 1d ton in or out. Wharfage ½d ton. Disbursements of a vessel 800 tons £18 3s 4d. **Pilotage.** £2 in or out for vessels under 200 tons, and ½d ton in and out, over 200 tons. **Towage.** No steamtugs stationed, or required.

WARBERG, Sweden. Lat. 57° 6' N; long. 12° 14' E. Pop. 2,700. Tr.—E. Grain, stone, salt fish, &c. Accn.

Harb. has 14ft of water.

WARNEMUNDE, Germany. Lat 54° 11' N; long. 12° 6' E. Pop. 10,000. Tr.—Same as Rostock.

Accn. 16 to 17ft across the bar. Vessels drawing 14ft may ascend from this port to Rostock. The pier has been extended by 400ft.

Pilotage. See Rostock. **Towage.** See Rostock.

WELLINGTON, New Zealand. Lat. 41° 16' S; long. 179° 19' E. Pop. 10,000. Tr.—I. Dry goods, furniture, coal, &c.; E. Wool, grain, vegetables, &c. Accn. Port Nicholson is an excellent and spacious harb.; there is wharfage accommodation for vessels drawing 25ft. There is sufficient water for the largest ships. **Charges.** Light dues 4d and 6d ton. Shifting 1d ton. Port charges 2d ton. Ballast 5/ ton. **Pilotage.** (In and out), sailing vessels of 500 tons or under 6d reg. ton; over 500 tons, first 500 tons 6d, for every ton over 500 tons 4d; steamers of all sizes two-thirds of the rates for sailing vessels.

WEYMOUTH, N.S. Lat. 44° 26' N; long. 66° W. Tr.—E. Deals and boards, principally to Great Britain and West Indies. Accn. Vessels of 15ft dft. can cross bar at OST., and lie aground alongside of wharves. **Charges.** Port dues 1d ton. **Pilotage.** Nominal, say 12/ to 15/.

WHAMPOA.—See Canton.

WIBORG, Russia. Lat. 60° 43' N; long. 28° 45' E. Pop. 13,000. Tr.—I. Sugar, coffee, salt, coals, wine, spirits, grain, herrings, tallow, &c.; E. Timber, butter, bristles, candles. Accn. Vessels drawing 10½ft can ascend to Wiborg. **Charges.** Expenses of a vessel of 1,247 tons, ballast in and deals out, about £170. Vessels drawing 15ft can enter outer port of Drang-sound, which is about ten miles from Wiborg. **Pilotage.** From £3 15s 1d for vessels of 9ft dft. to £9 16s 6d for vessels of 22ft dft.

WILHELMSHAVEN, Germany. Lat. 53° 32' N; long. 8° 9' E. Tr.—I. Coals, timber, and bricks; E. Oats, beans, and peas. Accn. A tidal harb. and three dry docks. Sp. rise 12ft, and N. 9ft. **Charges.** On barque, 400 tons, cargo in and ballast out, £97 18s 4d. **Pilotage.** On a brig of 180 tons, cargo in and ballast out, drawing 14ft, loaded: Sea pilotage to dock 87/, into dock 11/, out of dock 6/, to sea 50/.

WILMINGTON, California, U.S. Lat. 33° 43' N; long. 118° 15' W. Pop. 800. Tr.—I. Coal, iron, lumber, general merchandise; E. Grain, wool, wine, and fruits. Accn. Has 10ft of water on the bar at LT. and 15ft at OHT. The harb. within the bar has a ship channel several miles in length, with a depth of 26ft at LT. at the lower end, shoaling after 2 miles to 16ft. **Charges.** No port charges.

WILMINGTON, Cape Fear River, U.S. Lat. 34° 11' N; long. 77° 50' W. Pop. About 17,000. Tr.—I. Salt, general merchandise, &c.; E. Rice, turpentine, resin, cotton, wood, &c. Accn. Depth of water 16ft at LT. from the

mouth of the Cape Fear River to Wilmington, 12 to 20ft alongside the wharves. **Charges.** On a vessel of 179 reg. tons £35 14s 7d. **Pilotage.** Bar pilotage, from £1 18s 0½d for 6 and under 6½ft to £13 14s 10¾d for 17½ and under 18ft. River pilotage, from Smithville to Wilmington and *vice versa*, from £2 0s 1¾d for 6 and under 6½ft to £9 6s 1d for 15 and under 15½ft; from Five Fathom Hole to Wilmington and *vice versa*, from £1 9s 7¼d for 6 and under 6½ft to £6 6s 10½d for 15 and under 15½ft; from Smithville to Brunswick, or from Brunswick to Wilmington or *vice versa*, half the rate from Smithville to Wilmington; from Smithville to Five Fathom Hole, from Five Fathom Hole to Brunswick, from Brunswick to Campbell's Island, from Campbell's Island to Wilmington or *vice versa*, one quarter the rate from Smithville to Wilmington. Pilotage must be paid whether pilot is employed or not.

WILMINGTON Delaware, U.S. Lat. 39° 47' N; long. 75° 48' W. Pop. About 35,000. Tr.—I. General merchandise, &c.; E. Powder, cars, machinery, watches, flour, corn, meal, &c. Accn. Vessels drawing 17ft can reach the town at HW. **Charges.** None. **Pilotage.** None.

WINDSOR, N.S. Lat. 45° N; long. 64° 9' W. Tr.—I. Ship-building materials; E. Deals and plaster. Accn. Port perfectly safe for a vessel drawing 14ft, which can lie in mud alongside wharves. At HWST. 48ft; N. 40ft; at LW. channel is almost dry. **Charges.** No charge is made for wharfage. 2/1 at custom-house the only port charge. **Towage.** In 2½d, and out, loaded 4½d ton.

WISBY, Sweden. Lat. 57° 40' N; long. 18° 16' E. Pop. 16,000. Tr.—E. Marble, lime, cattle, and hops. The forests produce large trees fit for exportation. Accn. 14 to 16ft in the new harb., and in the old harb. 11 to 13ft. **Charges.** Moderate. On a vessel of 129 reg. tons, cargo of coals in and ballast out, about £10. **Pilotage.** On vessel drawing 11ft in and 8ft out, 14/3.

WISMAR, Germany. Lat. 53° 53' N; long. 11° 28' E. Pop. 16,000. Tr.—Same as Rostock. Accn. Close to the town there are 16½ft of water, but the roads are safe and deep. **Charges.** A little cheaper than Rostock. **Pilotage.** See Warnemünde. **Towage.** See Rostock.

WOLGAST, Germany. Lat. 54° 4' N; long. 13° 52' E. Pop. 6,000. Tr.—E. Wheat, &c. Accn. 15ft in the harb.; vessels drawing more than 13ft must lighten at Ostertief. **Charges.** Port charges of a vessel 110 tons £7 10s. **Pilotage.** On vessel of 210 reg. tons loaded £2 4s. **Towage.** From Wolgast to sea on vessel of 198 tons, 12ft dft., about £7 6s.

YARMOUTH, N.S. Lat. 43° 50' N; long. 66° 10' W. Pop. 8,000. Tr.—E. Fish, lumber, and deals. Accn. Vessels of any dft. can enter at half tide; vessels of 16ft dft. can lie afloat at any of the wharves. **Charges** are low. Harb. dues 14/7. Wharfage and labour cheap. **Pilotage.** In and out about 1d ton. **Towage.** 2d reg. ton inward and outward.

YENIKALE.—See Kertch.

YOKOHAMA, Japan. Lat. 35° 26' N; long. 139° 40' E. Pop. 50,000. Tr.—I. Dry goods, coal, petroleum, sugar, &c.; E. Tea, silk, lacquer ware. Accn. It is a good and safe port for vessels of any size. Sp. rise 6½ft; N. 4¾ft. A graving dock 393 by 82 by 21ft, and dry dock 300 by 52 by 14½ft. **Charges.**

Expenses of a vessel 1,188 tons, cargo coal in and ballast out, £438 17s 5d. **Pilotage.** In or out 12/6 foot.

YSTAD, Sweden. Lat. 55° 27' N; long. 13° 30' E. **Pop.** 8,000. **Tr.**—I. Coals, iron, salt, potatoes, oilcake, bones; E. Grain, oak, timber, beech, staves, and firewood. **Accn.** A safe harb. with a fine quay. Vessels of 16ft dft. can lie alongside the pierhead. Ystad is situated about 36 miles ESE. of Malmo. A patent slip 250 by 16ft for vessels up to 300 tons. **Charges.** For a vessel of 150 tons £13 to £15. **Pilotage.** On a ship of 150 reg. tons :—(a) coming with cargo from a foreign port, and going with cargo to a foreign port, (b) coming with cargo from, and going in ballast to a foreign port, (c) coming in cargo from a foreign port, and clearing coastwise in ballast :—(a) in, 12ft, 14/2½; out, 12ft, 14/2½; (b) in, 12ft, 14/4½; out, 9ft, 9/4; (c) in, 12ft, 14/2½; out, 9ft, 9/4. **Towage.** £1 6s 7d for vessels up to 250 reg. tons, above that size about 1½d per reg. ton.

ZANTE, Greece.—Lat. 37° 47' N; long. 20° 54' 42" E. **Pop.** 20,000. **Tr.**—I. Lumber, sugar, coffee, iron, coal, petroleum, &c.; E. Currants, olive oil, and wine. **Accn.** A capacious harbour. Ships anchor in from 10 to 12 fms at a distance of 500 to 1000 yds from and opposite to the town, sheltering themselves behind a mole or jetty when the wind is from the N.E. **Charges.** 15c. per ton with cargo in and out, 10c. per ton with cargo one way only. Expenses of loading a vessel of 298 tons about £51. **Pilotage.** From 7/ to 21/.

ZEBU, Philippine Islands. Lat. 10° 17' N; long. 130° 06' E. **Pop.** 10,000. **Tr.**—E. Chiefly sugar and hemp. **Accn.** Vessels (merchant) generally anchor SSW. of the fort, in 7 fms of water. **Charges.** On a vessel of 870 tons £103. **Pilotage.** On a vessel of 869 tons, in ballast inwards, and outwards with cargo of sugar, shells, hemp, &c., in or out £10. On a ship of 1,434 tons reg. (1,763 Spanish tons), ballast in, and cargo of sugar and hemp out, shifting anchorage £1 0s 10d, inwards £5 16s 8d, outwards £2 18s 4d.

ZIERIKZEE, Holland. THW. 2h; Sp. rise 10½ft; N. 9ft. **Tr.**—I. Coals, wine, and provisions; E. Madder. **Accn.** Harb. about 1½ miles long, with accn. for ships drawing 16ft. There are also two shipbuilding yards. **Charges.** On a vessel drawing 15ft £12 11s 8d. **Pilotage.** On vessel of 226 reg. tons, 15ft dft, inward £5 15s, in winter from Oct. 1 to April 1, 18/6, in harb. 15/10, to sea 21/4, in winter 24/, moving each time 2/6. **Towage.** Under 300 to 1,000 tons, Helvoet to sea, from £6 5s to £13 6s 8d; ditto to Zierikzee, or *vice versa* £9 3s 4d to £18 6s 8d; ditto to Dordrecht £6 13s 4d to £15 16s 8d; Zierikzee to sea £4 3s 4d to £10; ditto to Dordrecht £10 to £17 10s; sea to Zierikzee or Helvoet £7 10s to £19 11s 8d; each 10 tons above 1,000, 4d. Two ships being towed together, each ship pays £1 13s 4d less; the second vessel has to use one hawser. One ship wishing two boats pays £3 6s 8d more for the second boat.

ZWOLLE, Netherlands. **Pop.** 25,005. **Tr.**—E. Cattle, jute, &c. Only frequented by vessels of small tonnage. 6ft on bar. **Pilotage.** In and out, £2 15s. **Charges.** On vessel of 79 tons drawing 6½ft, £10 6s.

GENERAL STATISTICS OF STEAMERS ACCORDING TO THEIR FLAG.* From the Bureau Veritas Répertoire Général, 1890-91.									
Steamers of 100 tons net & upwards.									
Steamers under 100 tons net.									
Steamers recorded as lost.									
Flags.									
No.	Tonnage.		No.	Tonnage.		No.	Tonnage.		No.
	Gross.	Net.		Gross.	Net.		Gross.	Net.	
1 British	8,043,872	5,106,581	774	122,508	44,394	155	187,237	118,965	
2 German	930,254	616,182	54	6,890	3,806	17	18,301	13,199	
3 French	805,983	484,990	85	10,634	4,845	11	18,193	13,229	
4 American	533,313	375,950	22	2,964	1,630	12	13,512	9,262	
5 Spanish	423,027	273,819	44	6,196	2,900	8	6,099	3,802	
6 Italian	294,705	185,796	16	1,946	1,082	1	5,101	3,396	
7 Norwegian	245,052	176,419	39	4,789	2,974	6	3,853	2,995	
8 Dutch	220,014	149,355	8	1,123	485	5	9,777	6,768	
9 Russian	177,958	116,742	16	1,913	944	2	4,224	2,813	
10 Swedish	172,013	126,648	63	7,680	5,237	3	1,664	1,138	
11 Danish	154,497	103,578	19	2,618	1,409	5	4,646	3,286	
12 Austrian	149,447	96,593	22	3,118	1,542	1	185	98	
13 Japanese	123,779	76,412	1	143	80	2	739	790	
14 Belgian	98,056	71,658	38	3,620	1,837	1	426	526	
15 Brazilian	75,970	48,901	5	662	413	1	1,708	890	
16 Greek	70,435	44,484	6	745	309	1	645	387	
17 Portuguese	49,304	29,564	9	300	181	1	...	...
18 Chinese	43,306	26,540	...	...	...	...	...	...
19 Turkish	38,633	24,620	5	803	492	...	...	...
20 Chilean	34,309	22,863	3	202	80	4	2,973	2,244	
21 Egyptian	28,435	18,040	1	245	96	...	...	...
22 Argentine	25,039	14,986	14	1,611	875	...	...	...
23 Hawaiian	16,871	10,423	3	288	164	...	...	...
24 Zanzibar	9,654	6,042	...	...	...	...	...	...
25 Uruguay	8,191	5,021	1	129	49	...	...	...
26 Haitian	6,615	3,856	...	...	...	...	...	...
27 Mexican	5,890	3,710	...	...	...	...	...	...
28 Peruvian	5,268	3,151	3	140	78	1	123	90	
29 Roumanian	3,977	2,574	2	181	93	...	...	...
30 Venezuelan	3,801	2,581	1	157	99	...	...	...
31 Tunisian	1,762	1,204	...	...	...	...	...	...
32 Maroc	1,579	1,164	...	...	...	...	...	...
33 Siamese	1,454	1,004	...	...	...	...	...	...
34 Persian	838	579	...	...	...	...	...	...
35 Costa Rica	791	425	...	...	...	...	...	...
36 Ecuador	399	249	...	...	...	...	...	...
37 Nicaragua	395	166	...	...	...	...	...	...
38 San Domingo	167	103	...	...	...	...	...	...
39 Honduras	...	...	...	...	...	...	...	...
40 Unknown	20,001	13,929	...	...	...	...	...	...
Total	12,825,709	8,286,747	2,244	181,760	76,099	238	289,150	184,265	

The Répertoire Général only gives the sea-going vessels of at least 100 tons registered gross tonnage, therefore some difference must exist between the official statistics of a country and our list. N.B.—In the present issue (1890-91) and henceforth, the above statistics shall include also vessels under 100 tons claimed by the Bureau Veritas.

GENERAL STATISTICS OF EACH FLAG OF SAILING VESSELS.*

From the *Bureau Veritas Répertoire Général*, 1890-91.

FLAGS.	Ships of 50 tons and upwards.		Ships under 50 tons.		Ships recorded as lost.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
British	10,559	3,693,650	8	307	329	130,152
American	3,406	1,445,016	1	44	153	60,029
Norwegian.....	3,567	1,405,934	...	...	130	55,973
German	1,698	706,475	183	6,647	72	24,626
Italian	2,402	655,640	3	141	78	28,768
Russian	2,131	455,907	1	35	19	6,862
Swedish	1,799	373,357	11	444	23	5,674
Greek	1,457	299,473	1	24	7	1,835
French	1,627	298,787	153	5,432	56	10,394
Spanish	1,359	253,426	...	...	12	2,715
Dutch	861	230,250	2	74	28	11,402
Danish ..	877	145,862	33	1,222	23	6,258
Austrian	330	120,739	...	...	13	4,934
Turkish	512	89,357	...	...	...	...
Chilian	146	74,587	...	...	7	3,039
Portuguese	320	68,266	...	...	11	2,546
Brazilian...	268	56,222	...	...	2	916
Argentine Republic	106	29,378	1	41	1	1,073
Japanese.....	104	27,721	...	...	...	...
Peruvian.....	36	21,419	...	...	...	...
Hawaian	46	14,489	...	...	2	748
Uruguay.....	40	11,967	...	...	...	...
Nicaraguan	23	10,125	...	...	...	...
Mexican	50	8,830	...	...	1	177
Siamese	15	6,544	...	...	...	...
Belgian	14	5,251	1	25	...	...
Guatemala	16	4,728	...	...	...	...
Bolivian	5	3,992	...	...	...	...
Haitian	19	3,603	...	...	1	151
Roumanian	20	3,557	...	...	...	...
Venezuelan	13	2,287	...	...	...	...
Ecuador	4	1,731	...	...	...	...
San Salvador.....	4	1,453	...	...	...	...
Chinese	4	1,295	...	...	...	...
Montenegrin	6	1,241	...	...	...	...
Colombian	5	965	...	...	2	369
Liberian	3	916	...	...	...	...
St. Domingo	5	854	...	...	...	...
Costa Rica.....	2	551	...	...	...	...
Egyptian	1	414	...	...	...	...
Tunisian.....	2	130	...	...	...	...
Honduras	1	88	...	...	...	...
Unknown	16	3,574	...	...	...	...
Total...	33,879	10,540,051	398	14,436	970	358,641

* The *Répertoire Général* only gives the sea-going vessels of at least 50 tons register, therefore some difference must exist between the official statistics of each country and our list.

TARIFFS OF ALL NATIONS.

Corrected to November 15th, 1890.

I.—UNITED KINGDOM.

Articles subject to import duties in the United Kingdom, and the rate of duty levied upon each article, distinguishing the duties levied as ordinary import duties and those levied to countervail Excise and other Inland Revenue duties upon British productions, according to the tariff in operation at the present time. No export duties are levied in the United Kingdom.

ORDINARY IMPORT DUTIES.

- Cocoa.**—Raw, per lb., 1d. ; husks and shells, per cwt., 2s. ; cocoa or chocolate, ground, prepared, or in any way manufactured, per lb., 2d.
- Coffee.**—Raw, per cwt., 14s. ; kiln-dried, roasted, or ground, per lb., 2d.
- Chicory.**—Raw or kiln-dried, per cwt., 13s. 3d. ; roasted or ground, per lb. 2d. ; coffee, chicory, or other vegetable matter applicable to the uses of coffee or chicory, roasted and ground, mixed, per lb., 2d.
- Fruit, Per cwt. (Dried).**—Currants, figs, fig-cake, plums not preserved in sugar, prunes, and raisins, 7s.
- Tea, per lb., 4d.**
- Tobacco, per lb.**—*Unmanufactured*: stemmed or unstemmed, containing in every 100 lbs. weight thereof 10 lbs. or more of moisture, 3s. 2d. ; containing less than 10 lbs. of moisture, 3s. 6d. ; *manufactured*: cigars, 5s. ; cavendish or negrohead, 4s. 6d. ; snuff, containing in every 100 lbs. weight thereof, more than 13 lbs. of moisture, 3s. 9d. ; not more than 13 lbs. of moisture, 4s. 6d. ; other manufactured tobacco, and cavendish or negrohead manufactured in bond from unmanufactured tobacco, 4s.
- Wine, per gallon.**—Containing less than 30 degrees of proof spirits, 1s. ; containing 30 and less than 42 degrees of proof spirits, 2s. 6d. With an additional duty of 3d. per gallon for every degree of strength beyond the highest above specified. Degree not to exceed fractions of the next higher degree. Additional duty on sparkling wine imported in bottle, not exceeding the proved market value of 15s. the gallon, 1s. exceeding that value 2s. 6d.

IMPORT DUTIES TO COUNTERVAIL EXCISE DUTY.

- Beer and Ale**, the worts of which were, before fermentation, of a specific gravity of 1,057 degrees, per barrel of 36 gallons, 6s. 6d. ; and so in proportion for any difference in gravity.
- Beer, Mum, and Spruce**, per barrel of 36 gallons, the worts of which were, before fermentation, of a specific gravity not exceeding 1,215 degrees, £1 6s. ; exceeding 1,215 degrees, £1 10s. 6d.
- Spirits and Strong Waters.**—Rum, brandy, Geneva, and unenumerated spirits, per proof gallon, 10s. 10d. ; liqueurs, cordials, or other preparations containing spirits, in bottle, not tested for strength, per gallon, 14s. 8d. ; perfumed spirits and Cologne water, per gallon, 17s. 3d.
- Chloroform**, per lb., 3s. 1d.
- Chloral Hydrate**, per lb., 1s. 3d.
- Collodion**, per gallon, £1 5s.
- Ether, Acetic**, per lb., 1s. 10d.
- Ether, Sulphuric**, per gallon, £1 6s. 2d.
- Ethyl, Iodide of**, per gallon, 13s. 7d.
- Naphtha**, purified so as to be potable, per proof gallon, 10s. 4d.
- Soap (Transparent)**, in the manufacture of which spirit has been used per lb., 3d.
- Varnish**, containing alcohol. See Spirit Duties.

IMPORT DUTIES TO COUNTERVAIL STAMP DUTIES.

Playing Cards, per dozen packets, 3s. 9d.

Note as to Articles charged with Import Duties.—In this return sub-divisions of articles of a similar nature, and subject to the same rate of duty, are classed under one head. The total number of articles and sub-divisions of articles in the English tariff of Import Duties, was 53 in May, 1875, as compared with 397 in 1859, and 1,046 in 1840.

II.—THE COLONIES.

For Tariffs of British New Guiana, see page 460; Canada, see page 462; Gold Coast Colony, see page 481; Victoria, see page 483.

ABBREVIATIONS.

B. = Barbadoes.
BQ. = British Guiana.
C. = Ceylon.
CGH. = Cape of Good Hope.
Hon. = Honduras.
I. = India.
Ja. = Jamaica.
M. = Mauritius.
N. = Natal.
NF. = Newfoundland.
NSW. = New South Wales.

NZ. = New Zealand.
Q. = Queensland.
SA. = South Australia (and Northern Territories, indicated by NT. inserted where special rates apply to NT. only).
Tas. = Tasmania.
Tr. = Trinidad.
WA. = Western Australia.
a v. = ad valorem.

Acetic Acid.—See Vinegar.

Acids.—See Bleaching Materials.

Agricultural Machines.—See Iron, &c. (Machinery).

Ale.—See Beer and Ale.

Alkali.—B. 4% a v; BQ. 7% a v; CGH. Caustic soda 10% a v, other kinds 15% a v; C. Manures free, other kinds 6½% a v; I. Free; Ja. Soda free, others 12½% a v; M. Articles generally used as manures free, others 7½% a v; N. 5% a v; NF. 13% a v; NSW. Soda crystals free; NZ. Ash caustic and sulphate, silicate, nitrate free, bicarbonate and soda crystals 20/ per ton, carbonate 40/ per ton; Q. Soda and crystals 40/ per ton, bicarbonate of soda 20/, caustic soda 30/, nitrate 5% a v, other 7½% a v; SA. Soda crystals 40/ per ton, ash, caustic, nitrate, silicate free, other 20/ per ton; Tas. Ash, caustic, and silicate free, carbonate £9 6s 8d per ton, crystals £4 13s 4d per ton; Tr. Free; WA. 10% a v, soda crystals 40/ per ton.

Almonds.—See Confectionery.

Alum.—B. 4% a v; BQ. 7% a v; CGH. 15% a v; C. 6½% a v; I. Free; Ja. 12½% a v; M. 6½% a v; N. 5% a v; NF. 13% a v; NSW. Free; NZ. Free; Q. 7½% a v; SA. 10% a v; Tas. Free; Tr. Free; WA. 12½% a v.

Anchors.—See Iron, &c.

Apparel.—B. 8% a v; BQ. 7%; CGH. 15%; C. 6½%; I. Free; Ja. 12½%; M. 6½%; N. 5%; NF. 25%; NSW. Free; NZ. 15%; Q. 7½%; SA. 25%, (NT.) 15%; Tas. 10%; Tr. 4%; WA. 12½%.

Arsenic.—B. 4% a v; BQ. 7% a v; CGH. 15% a v; C. 6½% a v; I. Free; Ja. 12½% a v; M. 6½% a v; N. 5% a v; NF. 13% a v; NSW. Free; NZ. Free; Q. 7½% a v; SA. 10% a v; Tas. Crude free, other 10% a v; Tr. Free; WA. 12½% a v.

Awnings.—See Cottons, &c.

Bacon and Hams, per cwt.—B. 5/7½; BQ. 9/4; CGH. 9/4; C. 5/7½; I. Free; Ja. 18/8; M. 4/5½; N. 9/4; NF. 10/5; NSW. 18/8; NZ. 18/8; Q. 18/8; SA. 37/4, (NT.) 18/8; Tas. 18/8; Tr. Free; WA. 28/.

Bags.—See Cottons, &c.; also Linen, &c.

Barytes.—B. 4% a v; BQ. 7% a v; CGH. 15% a v; C. 6½% a v; Hon. Per lb, paints ½d.; I. Free; Ja. 12½% a v; M. 6½% a v; N. 5% a v; NF. 13% a v; NSW. Paint and colours ground in oil 3/ per cwt, varnishes 2/ per gall, other free; NZ. Druggists' sundries 15% a v, paints mixed, 2/ per cwt, other free; Q. Paints 2/ per cwt, other 5% a v; SA. Paints 4/ per cwt, (NT.) 2/ per cwt, druggists' sundries 10% a v; Tas. Paints per cwt 4/8, chemicals 10% a v; Tr. Free; WA. 12½% a v.

Belts.—See Linen, &c.

Beef (Salted).—B. per cwt 5/7½; BQ. pickled, dried, or smoked, per barrel of 200lbs. \$1 50c.; CGH. Per cwt 9/4; C. Per cwt 2/4; I. Free; Ja. Dry per cwt 9/4, wet 8/5; M. Per cwt 2/0½; N. Per cwt 9/4; NF. 4/2 per 200 lbs; NSW. Free; NZ. Free; Q. 7½% a v; SA. pickled 10% a v, other 9/4 per cwt; Tas. 1/8½; Tr. Except in tins 1/6 per 100 lbs.; WA. in pickle and brine and fresh 9/4.

Beer and Ale.—B. Per gall, in casks 2½d, in bottles 6d, with 25% additional on all duties; BG. In casks 4½d, in bottles 6d; CGH. All kinds 9d; C. In casks 3d, in bottles 3½d; Hon. Per lb 3d.; I. All kinds 1½d; Ja. All kinds 6d; M. In casks 7½d, in bottles per doz litres 2/; N. All kinds 9d; NF. All kinds 10d; NSW. In casks 6d, in bottles 9d; NZ. In casks 1/3, in bottles 1/4; Q. In casks 9d, in bottles 1/; SA. 1/ per gallon (NT.) All kinds 9d; Tas. In casks 9d, in bottles 1/3; Tr. In casks 6d, in bottles 1/; WA. All kinds 1/.

Bells.—See Brass, Copper, &c.

Belting.—See Hides and Skins.

Biscuits.—See Confectionery.

Blankets.—See Cottons, &c.; also Woven Manufactures.

Bleaching Materials.—B. 4% a v; BG. Lime free, other 7% a v; CGH. 15% a v; C. Acids, fuller's earth free, others 6½% a v; I. Free; Ja. 12½% a v; M. Free; N. 5% a v; NF. 13% a v; NSW. Free; NZ. Acids free, druggists' sundries 15% a v, others free; Q. Sulphuric 2/6 per cwt; SA. Nitric, sulphuric, and muriatic acid 5/ per cwt, (NT.) Sulphuric acid and bluestone free, others 10% a v; Tas. Carbonic, citric, sulphuric, carbolic, and muriatic acid, bluestone, chloride, and carbonate of lime free, tartaric 3/4 per cwt, blue 18/8, others 10% a v; Tr. Free; WA. Disinfectants 5% a v, others 12½% a v.

Boilers.—See Brass and Copper.

Boiler Plates.—See Iron, &c.

Bolsters.—See Household Furniture.

Bolts, Bars, &c.—See Brass and Copper.

Books.—B. Free; BG. Free; CGH. Free, with registration charge of 1/ per ton or 6d per package, reprints British copyright 20% a v; C. Free; I. Free; Ja. Free; M. Free; N. 5% a v; NF. Free; NSW. Free; NZ. 15% a v; Q. Free; SA. Free; Tas. Free; Tr. Free; WA. Free.

Boots and Shoes.—See Hides and Skins (Leather and Leatherwares).

Borax (refined).—B. 4% a v; BG. 7% a v; CGH. 15% a v; C. 6½% a v; I. Free; Ja. 12½% a v; M. 6½% a v; N. 5% a v; NF. 13% a v; NSW. Free; NZ. Free; Q. 7½% a v; SA. 10% a v; Tas. 10% a v; Tr. Free; WA. 12½% a v.

Bottles.—See Earthenware; also Glass.

Braces.—See Cottons, &c.

Brackets.—See Brass, Copper, &c.

Brandy.—See Spirits.

Brass and Copper.—B. Composition nails, bolts, bars, rods, spikes, and rivets copper sheets, rods, bars, bolts, spikes, nails, and rivets, 4/8 per cwt, yellow metal in sheets 4/8 per cwt, copper and brass, old 2/3 per cwt, other kinds 4% a v; BG. Fire engines, pans, teaches, tanks for manufacture of sugar and storage of water, telegraph and electric lighting materials free, other kinds 7% a v; CGH. Railway and telegraphic materials free, metal sheathing or composition 10% a v, other kinds unwrought and wrought 15% a v; C. Machinery, apparatus, and parts free, copper sheathing, bars, bolts, ingots plates, nails, and tacks 5/7½ per cwt, brass sheets, wire, and nails 5/7½ per cwt, other kinds 6½% a v; Hon. Per lb, brass, bruto weight ½d, manufactures 1½d, copper, ore, ingots, bar, sheet ½d, medical instruments 4½d; I. Copper and brass, all kinds free; Ja. Pans for boiling sugar, copper pipes for conveying fluids, pumps for raising water, stills, or parts of, and parts of steam-engines, and machinery free, other kinds 12½% a v; M. Machinery and apparatus for manufacture or improvement of produce free, other kinds 6½% a v; N. Copper ore, machinery used exclusively in the manufacture of any of the productions of the soil, and in sawing timber, brick or tile making, or for agricultural, manufacturing and mining operations, distillation or other chemical processes, or in cleansing, preserving, or preparing articles for export free, other kinds 5% a v; NF. Old copper and composition metal, nail strips for manufacture of cut nails, copper and composition metal and nails for sheathing the bottoms of vessels, propellers for original construction of steamers in the Colony free, copper and composition metal for ships, bar, bolt, and sheathing nails, ex. brass cut nails, machinery and parts for machinery 8% a v, all other 13% a v; NSW. All kinds free; NZ.

Brass and Copper—continued.

Brass, pig, bar, sheet and solid rod tubing and stamped work in the rough for gasaliers and brackets, copper and composition, pig, bar, or sheet, rod, bolts, sheathing and nails, fine copper and brass wire for brush making, axles, axle arms, boxes, bolts, and nuts, fire-engines, gas pipes and machinery, and all material specially imported for gas works, grindery, toe and heel plates, metal frames for bags and sachels, photographic goods, printing machinery and materials, pumps and apparatus for raising water, saddlers' mounts for harness, ships' blocks, steam-engines and parts, tinsmiths, fittings, and trade furniture, tools, artificers', water pipes not otherwise described, and all materials which may be specially imported for the purpose of constructing water works free, percussion caps 1. per 1,000, musical instruments 15% a v, nails not otherwise enumerated 3/ per cwt, other kinds 15% a v; Q. Copper sheet, Muntz metal, machinery for manufacturing, sawing, sewing, agricultural, mining and pastoral purposes, steam-engines and boilers free, other kinds 5% a v; SA. Kettles and pans 25%, stoves, cornices, ovens, fenders and fire-irons, lamps, plated goods, musical instruments 10% a v, brass castings, forged work used in the manufacture of steam-engines, pumps, iron and brass, exceeding three-inch bore, steam boilers 5% a v, copper nails 2' per cwt, other kinds, unwrought and wrought free; Tas. Copper ore, ingots, sheets and plates of copper, brass, or bronze, brass cocks and tubing for engine fittings, copper or yellow metal, rod, bolt, sheathing, and nails, ships' blocks, binnacle lamps, signal lamps, compasses free, agricultural machinery, cart and carriage axle boxes 5% a v, other brass and copper ware 10% a v; Tr. Machinery, &c., for manufacture of produce and parts thereof free, other kinds 4% a v; WA. Copper sheet and rod 10% a v, machinery, apparatus, &c., fire-engines, machinery for boring for water and coal, immigrants' tools and instruments of trade not exceeding £10 in value, musical instruments, and parts for places of worship, and for volunteer force free, metal sheathing and rails, gas pipes, parts of steam engines, brewery and distillery plant, wire cloth for quartz crushing machinery, and work for patent slips and docks 5% a v, pumps and metal piping for raising water, telegraphic instruments, and wire 10% a v, brass, sheet, or rolled copper, rod, sheet, and wire 5% a v.

Bread.—Tr. 1/6 per barrel; Ja. Per 100lbs 6; NF. Bread 20% a v, sea biscuit 20c per quintal.

Brewery Plant.—See Brass, Copper, Lead, &c.

Bricks.—See Earthenware.

Brimstone.—B. 4% a v; BG. 7% a v; CGH. Flowers of sulphur free, other 15% a v; C. 6½% a v; I. Free; Ja. 12½% a v; M. 6½% a v; N. 5% a v; NF. 13% a v; NSW. Free; NZ. Sulphur 1/ cwt.; Q. 7½% a v; SA. Brimstone, crude for manufacturing free, other 10% a v; Tas. Sulphur free; Tr. Free; WA. 10% a v.

Bronze.—See Brass and Copper.

Building Materials.—See Lead, &c.

Burr Stones.—See Grindstones.

Butter, per cwt.—B. 7 6; BG. 9/4; CGH. Butter, including butterine, or any substance for use as, or mixing with, butter, 14'; C. 5'7½; Hon. Per lb 1½d; I. Free; Ja. 18 8; M. 4'5½; N. 28/; NF. 8'4; NSW. 1d per lb; NZ. Free; Q. 18 8; SA. 18/8, butterine 37/4 per cwt, (NT.) butter free; Tas. 18 8; Tr. 9/4; WA. 18 8.

Buttons.—See Cottons, &c.; also Glass; also Gold and Silver Ware; also Lead, &c.; also Linen, &c.; also Woven Manufactures.

Cabs.—See Carriages.

Candles, per cwt.—B. 9/4; BG. Tallow 4/8, other £1 3s 4d; CGH. 9/4; C. 6½% a v; Hon. Per lb 1½d; I. Free; Ja. Tallow 7/, composition wax or spermaceti 18 8; M. 6½% a v; N. 9/4; NF. 20' a v; NSW. 9/4; NZ. Tallow 4/8, other 14; Q. 18 8; SA. 18/8, (NT.) 9/4; Tas. 18/8; Tr. Free; WA. 18 8.

Canvas.—See Linen, &c.

Caoutchouc.—See Indiarubber, &c.

Cards.—See Paper, &c.

Carpets.—See Linen, &c.; also Woven Manufactures.

Carriages.—B. 4% a v; BG. 7% a v; CGH. Railway materials free, carriages, carts, and wagons, and other wheeled vehicles, including wheelbarrows 5% a v, axles, springs, and lamps, for carts and carriages 10% a v; C. 6½% a v; Hon. Carriages and horse cars, cars (railroad, steam), free; I. Free; Ja. Carriages, carts, and wagons agricultural, free, other kinds 12½% a v; M. 6½% a v; N. railway carriages free, other kinds 5% a v; NF. 25% a v; NSW. Free; NZ. Carriages, carts, drays, and wagons, 15% a v, railway carriages and perambulators free, detached parts of carriages, carriage and cart wheels 15% a v, other free; Q. 7½% a v; SA. Tilburys, dog-carts, gigs, Boston chaises, and other two-wheeled vehicles, on spring or thorough braces £10 each, express wagons and wagons for carrying goods, and single or double-seated wagons and four-wheeled buggies, without tops, mounted on springs or thorough braces £15 each, hansom cabs, safety, single, and double-seated wagons, wagonettes, and four-wheeled buggies, with tops £20 each, omnibuses and coaches, for carrying mails or passengers £40 each, barouches, broughams, mail phaetons, drags £50 each, not enumerated 25%, (NT.) Carriages, carts, wagons, and vehicles of every description, and wheels 10% a v; Tas. Traction engine carriages, carriage shafts, spokes, naves or felloes free, carriages on two wheels and springs intended to be drawn by cattle on ordinary roads £6 each, carriages on four wheels ditto £12 each; cart and carriage axles, arms and boxes 5% a v, other kinds 10% a v; Tr. Carriages on springs, four-wheeled £7 each, ditto two-wheeled £4 each, other kinds free; WA. 20% a v.

Carts.—See Carriages.

Cement.—B. Pozzolano, building and temper lime, free, cement 1/3 per barrel; BG. Lime and plaster of Paris free, other 7% a v; CGH. Barrel of 400 lbs 1/6; C. 3½d per cwt; Hon. Free; I. Free; Ja. 12½% a v; M. 6½% a v; N. Portland and Roman 2' per barrel of 400 lbs, other 5% a v; NF. 13% a v; NSW. 2' per barrel; NZ. 1/ per barrel; Q. 2/ per barrel; SA. 2/ per barrel; Tas. Mineral 9d per cwt; Tr. Free; WA. 2' per barrel.

Chains.—See Gold and Silver Ware.

Cheese, per cwt.—B. 8¼; BG. 9¼; CGH. 18/8; C. 5¼; Hon. Per lb. ¼d; I. Free; Ja. 18/8; M. 4/5; N. 18/8; NF. 10/5; NSW. 18/8; NZ. Free; Q. 28/; SA. 37/4, (NT.) 18/8; Tas. 18/8; Tr. 9¼; WA. 28/.

Chemicals.—See Barytes.

China.—See Earthenware.

Chocolate and Prepared Cocoa, per cwt.—B. Cocoa 2¼, other 4% a v; BG. 18/8; CGH. Confectionery and manufactured sweets 18/8, plain chocolate 4/8, cocoa 9/4; C. 6½% a v; I. Free; Ja. Cocoa 11½, other 12½% a v; M. 6½% a v; N. 1d per lb; NF. 28/; NSW. Raw cocoa 28/, all others £1 17s 4d; NZ. £1 8s; Q. £1 17s 4d; SA. £1 8s; Tas. £1 8s; Tr. Free; WA. £1 8s.

Cigars and Cigarettes, per lb.—B. 5/; BG. 5/; CGH. Cigars 4/ with 10% a v, cigarettes 3/; C. Cigars and cheeroots 1/10½; Hon. Cigars Govt. monopoly, cigarettes 2/8 per lb; I. Free; Ja. Cigars 5/; M. Cigars 1/11; N. Cigars 4/; NF. Cigars 16/8 per M with 10% a v; NSW. 6/; NZ. 6/; Q. Cigars 5/; SA. 6/3, (NT.) Cigars 5/; Tas. 5/; Tr. 2/; WA. Cigars 5/.

Cinders.—See Coal.

Clocks and Watches, a v.—B. 4%; BG. 7%; CGH. 15%; C. 6½%; Hon. Per lb, clocks 9½d, watches 5/; I. Free; Ja. 12½%; M. 6½%; N. 5%; NF. 13%; NSW. Free; NZ. Movements for watches and watchmakers' materials free, other 15%; Q. 7½%; SA. 15%, (NT.) 10%; Tas. Clocks for churches free, other 10%, watches 12½%; Tr. 4%; WA. 12½%.

Clothing.—See Cottons, &c.; also Linens, &c.; also Woven Manufactures.

Coaches.—See Carriages.

Coal, Cinders and Patent Fuel, per ton.—B. Fuel, coal and mixed preparations thereof and coke 2/6; BG. Coal (including the package) 1 4 per hhd; loose, per ton 2', other 7% a v; CGH. Coal, coke and patent fuel 1' per ton; C. Free; Hon. Coal free; I. Free; Ja. Free; M. Free; N. Cinders and patent fuel 3/; NF. At St. John's, Harbour Grace, and Carbonear 1 3, other ports free; NSW. Free; NZ. Free; Q. Coals 2/ per ton; SA. Free; Tas. Coal and coke 1', other 10% a v; Tr. Free; WA. Free.

Cocoa.—See Chocolate.

Coffee.—B. 2/9½ per cwt; BG. 7/ per cwt; CGH. 4/2 per 100 lbs; C. Free; I. Free; Ja. British colonial 22/4½ per cwt, other 12½% a v; M. 4/5½ per cwt; N. ½d per lb; NF. Green 22/6 per cwt, roasted 32/8 ditto; NSW. Raw 28/ per cwt, roasted 56/; NZ. Raw 28/ per cwt, roasted £2 6s 8d ditto; Q. Raw £1 17s 4d per cwt, roasted £2 16s ditto; SA. Raw, 28/ per cwt, (NT.) Raw free, roasted £1 17s 4d ditto; Tas. Raw 28/ per cwt, roasted £1 17s 4d ditto; Tr. Free; WA. Raw 18/8, roasted 28/ per cwt.

Confectionery (see also Chocolate), per cwt.—B. 4% a v; BG. £1 3s 4d; CGH. 14/; C. 6½% a v; Hon. Biscuits per lb ½d; I. Free; Ja. 12½% a v; M. 6½% a v; N. 18/8; NF. 22/, jams and preserves 1d per lb; NSW. (and fruit) 18/8, jams 9/4; NZ. Almonds used in confectioners' manufactures free, other almonds shelled and plain and unshelled, and biscuits 3/, fancy biscuits, confectionery (boiled sugars, comfits, lozenges, &c.), 18/8, bottled fruits (except syrup or spirits) 1/ per doz., dried fruits 18/8, candied peel £1 8s, jams, jellies, marmalades and preserves 14/, other kinds 15% a v; Q. 37/4, biscuits 18/8, jams and jellies per doz reputed pints or lb jars 2/; SA. 28/, biscuits 18/8, (NT.) 18/8; Tas. 9/4, almonds 18/8, biscuits plain 9/4, fancy 18/8, candied fruits 28/, honey 18/8, confectionery 18/8, preserves, jams, jellies, &c. 9/4; Tr. Free; WA. £1 17s 4d per cwt, biscuits 9/4.

Copper Wares.—See Brass and Copper.

Copperas, a v.—B. 4%; BG. 7%; CGH. 15%; C. 6½%; I. Free; Ja. 12½%; M. 6½%; N. 5%; NF. 13%; NSW. Free; NZ. As drugs, druggists' sundries and apothecaries' wares 15%, other free; Q. 7½%; SA. Bluestone free, other 10%; Tas. Free; Tr. Free; WA. 12½%.

Cordage and Twine.—B. Cordage 1/8½ per cwt, twines 4% a v; BG. Cordage including gasketing 4/2 per cwt; CGH. 15% a v; C. Coir yarn, rope, fibre, and twine and strands, free, other kinds 6½% a v; I. All kinds free; Ja. 12½% a v; M. 6½% a v; N. 5% a v; NF. Twine to be used in manufacturing net in Colony free, cordage, viz., rope and hemp, coir and manilla cables, and fishing tackle 10% a v; NSW. Cordage and rope 2/ per cwt, other kinds free; NZ. Coir yarn, twine for harvesters and binders, fishing nets and sailmakers' seaming and roping twine free, twine not otherwise enumerated 15% a v, cordage and rope 5/ per cwt; Q. cordage and rope 8/ per cwt, twine 9/4 per cwt; SA. Cordage, coir rope 5/ per cwt, other (except galvanised and other iron and steel cordage) 11/ per cwt, galvanised and iron 3/ per cwt, twines and cord, including fishing lines (except sewing or seaming twines) 18/8 per cwt, (NT.) Cordage, rope, spun yarn (except raw yarn used for manufactures) and whipcord, 3/ per cwt, cotton and linen cords 10% a v, twine free; Tas. Whaling gear, rope and cordage free, twine 9/4 per cwt, whipcord 10% a v; Tr. Cord, ferretings 4% a v, others free; WA. 5% a v.

Corn (Wheat).—B. 6d per 100 lbs; BG. 2½d per bushel; CGH. 1/4 per 100 lbs, flour 1/; C. 6½d per bushel; Hon. Free; I. Free; Ja. 9d; M. 6½d per cwt; N. Free; NF. Free; NSW. Free; NZ. 9d per 100 lbs; Q. 6d per bushel; SA. 2/ per 100 lbs, (NT.) By sea 10% a v, other free; Tas. 10d per 100 lbs, flour 1/3; Tr. 5d per bushel; WA. 6d per 60 lbs.

(Indian).—B. 6d per 100 lbs; BG. 5d per bushel; CGH. 1/ per 100 lbs; C. 6½d per bushel; Hon. Free; I. Free; Ja. 4d per bushel; M. 7½d per cwt; N. 1/ per cwt; NF. 12½% a v; NSW. Free; NZ. 9d per 100 lbs; Q. 6d per bushel; SA. 2/ per 100 lbs, (NT.) By sea 10%, other free; Tas. 8d per 100 lbs, corn flour and maizena 1d per lb; Tr. 5d per bushel; WA. 6d per 60 lbs.

(Wheaten).—B. 4/2 per barrel; BG. 4/2 ditto; CGH. 3/6 per 100 lbs; C. 1/10½ per cwt; Hon. Free; I. Free; Ja. 8/ per barrel; M. 9½d per cwt; N. Free; NF. 1/0½ per barrel; NSW. Free; NZ. 1/ per 100 lbs; Q. Free; SA. 2/ per 100 lbs, (NT.) By sea 10%, other free; Tas. 1/3 per 100 lbs; Tr. 3/4 per barrel; WA. 20/ per 2,000 lbs.

Rice.—B. 6½d per cwt; BG. 1/2 per cwt; CGH. 11d paddy, 1/4 per 100 lbs; C. 6½d per bushel, paddy 3d per cwt; I. Free; Ja. Undressed 1/ per bushel, other 3/ per 100 lbs; M. 6½d per cwt; N. 1/ per cwt; NF. 12½% a v; NSW. 3/ per cwt; NZ. 4/8 per cwt; Q. 9/4 per cwt barley 9d per bushel, malting do. 1/6, maize and oats 8d; SA. 3/ per cwt (4/8 per cwt in Northern Territory); Tas. 9/4 per cwt; Tr. 2/2 per cwt; WA. 2/ per cwt.

Corrugated Iron.—See Iron, &c.

Cotton.—See Woven Manufactures (Cotton).

Crystals.—See Alkali.

Disinfectants.—See Bleaching Materials.

Dogs.—Tr. 20/ each.

Drapery.—See Cottons, &c.

Druggists' Materials.—See Barytes; also Bleaching Materials.

Druggists' Sundries.—See Sal Ammoniac.

Dye stuffs.—See Indigo.

Earth-Closets.—See Earthenware.

Eau de Cologne.—See Perfumery.

Earthenware and Porcelain, a v.—B. Empty stoneware bottles free, bricks, 3/ per 1,000, all other 4% a v; BG. Bricks 1/3 per 1,000, other 7%; CGH. Telegraphic materials free, other kinds 15%; C. Bricks and tiles, apparatus and parts of machinery free, other kinds 6½%; Hon. Per lb. earthen, stone, and china ware, according to quality, ½d to 1½d; I. All kinds free; Ja. Bricks (not Bath), pipes for conveying fluid, tiles free, other kinds 12½%; M. Bricks and tiles, apparatus for manufacture or improvement of produce free, other kinds 6½%; N. Bricks, fire-bricks and tiles 5%; NF. All kinds 13%; NSW. All kinds free; NZ. Drainage pipes, tiles, and bottles empty, all materials specially imported for the construction of gas-works, water-pipes not otherwise described, and all materials specially imported for the construction of waterworks free, earthenware, chinaware, porcelain and parian ware 15%; Q. All kinds 7½%; SA. chinaware and earthenware not enumerated 15%, (NT.) 10%, tiles, brown earthenware, 25%; Tas. Water pipes, drain pipes, draining tiles, fire and building bricks free, chimney-pots 9d per cwt, all other kinds 10%; Tr. 4% a v; WA. Drainage pipes and tiles, and earth-closets 5%, stone bottles and telegraphic materials 10%, other kinds 12½%.

Electrical Apparatus.—See Brass, Copper, &c.; also Earthenware; also Glass, &c.; also Indianrubber, &c.

Electrotypes.—See Lead, &c.

Engine Fittings.—See Iron, &c.

Epsom Salts, a v.—B. 4%; BG. 7%; CGH. 15%; C. 6½%; I. Free; Ja. 12½%; M. 6½%; N. 5%; NF. 8%; NSW. Free; NZ. 15%; Q. 7½%; SA. 10%; Tas. Free; Tr. Free; WA. 12½%.

Essences, per gall.—NSW. With not more than 25% of proof spirits 4/, over 25% 14/.

Fenders.—See Brass, Copper, &c.

Fencing Wire.—See Iron, &c.

Fire Arms.—N. Guns 20/ each; pistols or barrels 5/ each.

Fire Bricks.—See Earthenware.

Fireclay, a v.—B. 4%; BG. 7%; CGH. 15%; C. Free; I. Free; Ja. 12½%; M. 6½%; N. 5%; NF. 13%; NSW. Free; NZ. Free; Q. 7½%; SA. Free; Tas. Free; Tr. Free; WA. 12½%.

Fire Engines.—See Brass, Copper, &c.; also Iron and Steel.

Fire Irons.—See Brass, Copper, &c.

Fish.—B. Dried 2½d per cwt, pickled 5d per barrel, other kinds 4% a v; BG. 2/1 and 1/0½ to 8/4 respectively; CGH. Dried and pickled 9/4 (but produce of Africa, free); C. Dried 11½d per cwt, pickled 11½d per barrel; Hon. Per lb ½d; I. Free; Ja. Dried 3/11 per cwt, smoked salmon 18/8 per cwt, wet or salted 10/6 per barrel of 200 lbs, other kinds 12½% a v; M. Dried and pickled 1/0½ per cwt; N. Dried and pickled 5% a v; NF. Cod and haddock 6/3 per cwt, other kinds free; NSW. Dried and pickled 9/4 per cwt; NZ. 2/; Q. 5/, preserved 2/ per doz lbs, salted and dried 5/ per barrel; SA. Dried and salted, and sardines (except in pickle or brine), 9/4 per cwt.; preserved (except sardines), fish paste 13/8 per cwt, (NT.) Dried 9/4 per cwt, pickled 10% a v; Tas. Ditto Tr. Dried 9/4; WA. 12½% a v.

Floor Cloth.—See Linen.

Flour.—See Corn.

Fuller's Earth.—See Bleaching Materials.

Furs.—See Hides, Skins, &c.

Quassia.—See BARK, Copper, &c.

Quia.—Tr. 9/4.

Qua.—See Spirits

Glass and Glassware, a v.—B. Bottles, empty free, other kinds 4%; BQ. Electric lighting and telegraphic apparatus free, other kinds 7%; OGM. Telegraphic materials, &c., bottles of common glass, imported full free, other kinds 15%; C. All kinds 64%; Mon. Per lb. glass and manufactures 3d. 1. All kinds free. Ja. All kinds 12 1/2%; M. Glass bottles full, except fancy bottles or decanters, free, other kinds 6 1/2%. N. Glass and glassware 5%. NP. All kinds 15%. NSW. All kinds free. NZ. Bottles of all kinds, empty (except for druggists' fittings), photographic goods, stained glass for churches, school apparatus free, crown, sheet and common window glass 2 per 100 ft sup., plate, polished, coloured and other kinds of glass not otherwise enumerated 15%, shades glazed with ornamental glass 4 per pair, ditto with plain glass 2 per pair, glass-ware and looking-glasses 15%; Q. All kinds 7 1/2%. SA. Silvered glass, glassware, cut, engraved, etched or ground, and bottles (except medicine bottles) 25%, other 10%; Tan. 7%; Tr. Free; WA. Bottles 5%, other kinds 12 1/2%.

Gleues.—See Cottons, &c.; also Hides, &c.; also Woven Manufactures.

Gold and Silver Ware, a v.—B. All kinds 4%; BQ. All kinds 7%. OGM. All kinds 15%; C. All kinds 64%; Mon. Per lb. jewellery, gold 3; duble 1 1/2; 1. All kinds free. Ja. All kinds 12 1/2%; M. All kinds 6 1/2%; N. All kinds 5%; NP. All kinds 15%; NSW. All kinds free; NZ. All kinds 15%; Q. Jewellery and plate 25% a v; SA. Gold leaf free, other kinds 20%, jewellery, silverware 25%; Tan. All kinds 12 1/2%; Tr. All kinds 4%; WA. All kinds 20%.

Gold Leaf.—See Gold and Silver Ware.

Goshan.—See Hides, Skins, &c.; also Indiarubber, &c.

Grosses, a v.—B. Tallow 4/3 per cwt, other 4%; BQ. 7%; OGM. Tallow 1 1/4 per 100 lbs; C. Free; 1. Free; Ja. Tallow, grosses, tallow-grosses, or grosses and stink free; M. Bone oil free, other 6 1/2%; N. 5%; NP. Tallow 5%, other 15%. NSW. Free; NZ. Free; Q. Tallow 1 1/4 per cwt, other 15%; SA. Turpentine and varnish 6d. per gall. NT. Free; Tan. Tallow and nut free; Tr. Free; WA. 12 1/2%.

Grindstones and Millstones, a v.—B. 4%; BQ. Millstones free, grindstones 7%; OGM. 15%; C. Free; 1. Free; Ja. Mills, parts of, free, other kinds 12 1/2%; M. Machinery for manufacture of produce free, other 6 1/2%; NP. Parts of machinery 8%, other kinds 15%. NSW. Free; NZ. Free; Q. Machinery for manufacturing purposes free; SA. Free; Tan. Free; Tr. Machinery for manufacture of produce free, other kinds 4%; WA. Millstones 5%, grindstones 12 1/2%.

Gunpowder.—N. per lb. 6d; Tr. 9/4.

Gums.—N. each 2d.

Gutta Percha.—See Indiarubber, &c.

Haberdashery.—See Indiarubber, &c.; also Linen, &c.; also Woven Manufactures.

Hairs.—See Bees and Hens.

Handkerchiefs.—See Linen, &c.

Hardware.—See Household Furniture.

Hats (Dress, Silk and Felt) a v.—B. 4%; BQ. 7%; OGM. 15%; C. 6 1/2%; 1. Free; Ja. 12 1/2%; M. 6 1/2%; N. 5%; NP. 15%; NSW. Free; NZ. 15%; Q. 7 1/2%; SA. from 8 to 60 lb per doz, not enumerated 25%; NT. 10%; Tan. 10%; Tr. 4%; WA. 12 1/2%.

Hemp.—See Linen.

Hides, Hair

Wrought, a v.—B. Hides and 1. All kinds 7%; OGM. Boots, &c. addition, other 25%; C. All kinds quality 4d to 1/2, leather 4d. Raw hides, skins for conveying All kinds 6 1/2%. N. 5%; NP. Not other 15% a v, NSW. All kinds or pairs, leather, sole, 4 1/2 per cwt, Q. Leather 12 1/2, boots and shoes, 14, boys 12, women's 13, girls. Hides and skins, raw, free, boots

and shoes from 11 1/2 to 35 per doz. pairs, harness, military made up,

Hides, Skins and Leather—continued.

and leatherware, all kinds 25% (NT.) Boots and shoes 10%, leather, patent, kid, &c., free, other 10%; Tas. Hides and skins, raw and unmanufactured free, leather and all goods manufactured therefrom, in whole or in part, including hides and skins dressed in any manner 10%; Tr. Leather manufactures, being boots, shoes, slippers and leggings of all kinds, harness and saddlery 4%; WA. Hides 5%, hides, raw, free, and apparatus for raising and distributing water 10%, all other 5%, saddlery and harness 20%.

Hops.—B. 4% a v; BG. 7% a v; OGH. 10% a v; C. free; Mon. ½d lb; I. free; JA. 12½% a v; M. 6½% a v; N. 5% a v; NF. 11% a v; NSW. 3d lb; NZ. 6d lb; Q. 6d lb; SA. 6d lb; (NT.) 3d lb; Tas. 2d lb; Tr. free; WA. 4d lb.

Horses.—B. Foals, horses belonging to equestrian companies and taken away with them, and race horses after the first importation, if drawback has not been claimed, free, other horses, under 13½ hands 10/ each, ditto of or above 13½ hands 6s each; BG. horses, stallions under 14½ hands 6s 16s 8d each, all other horses 6s 10s 6d each; OGH. free; C. free; I. free; JA. 10/ each; M. Free; N. Free, with a registration charge; NF. 12/6 each; NSW. Free; NZ. Free; Q. Free; SA. Free; Tas. Free; Tr. 6s 2s 6d each; WA. Free.

Hose.—See Hides, &c.

Hosiery.—See Cotton, &c.; also Indianrubber, &c.; also Linen, &c.; also Woven Manufactures.

Household

OGH. 15%; Q. 6½%; I. Free
F. settlers, free, manufacture
other furniture 13%; NSW.
1d by passengers for use, free.
a. Cabin furniture (passengers
10%; Tr. Hardware 4%
(passengers arriving in the

Indianrubber and Gutta Percha (Unwrought and Wrought), a v.—B. All kinds 4%; BG. Electric lighting and telegraphic apparatus free, other kinds 7%; OGH. Golokhas 2/ per dozen pairs with 10% a v

other kinds 5%.

Indigo.—B. 4% a v; BG. 7% a v; OGH. 15% a v; C. 6½% a v; JA. 6s 1s 8s per cwt; M. 6½% a v; N. 5% a v; NF. Free; NSW. Blue 9/4 per cwt, other free; NZ. Blue 9/4 per cwt, other free; Q. Blue 9/4 per cwt, other 7½% a v; SA. Blue 9/4 per cwt, other 10% a v; Tas. Dye stuffs for manufacturing purposes free, other 10% a v; Tr. Free; WA. 12½% a v.

Ink.—See Paper, &c.

Iron and Iron Wares (Plain and Galvanised, Pig, Bar, Rod, Plate, Sheet, and Hoop).—B. Hoops, bars and rods 7/5½ per ton, other 4% a v, machinery for cultivation or manufacture of sugar free; BG. 10% a v; OGH. Bar free, rod 5% a v, other (except railway and telegraph materials free) 15% a v, agricultural implements (except Kafir hoes and picks) 5% a v, sheet iron (not corrugated) free; C. Railway and hoop free, pig 4/8½ per ton, bar and rod 7/6, plate and sheet 9/4½; Mon. Per lb ½d, manufactures 1½d, medical instruments 4½d., I. Free; JA. 12½% a v; M. 6½% a v; N. Pig, hoop and tram rails free, NF. Boiler and ship plates and pig free, other 8% a v; NSW. Corrugated bars or sheets 40/ per ton, other free; NZ. Free; Q. Free; SA. Boilers 25%, iron or steel columns, girders (rolled or riveted), pipes, tubes, nails

Lead and Leadwares—continued.

10/ per cwt, lead and compo piping 3/6 per cwt, paints, mixed 2/ per cwt, other kinds 15% a v; Q. Lead, sheet and pig free, white and red 2/ per cwt, shot 2/ per cwt, other kinds 7½% a v; SA. Window sashes 4/ and 6/ per pair, (NT.) 2/6, lead, pipe and sheet, also shot 2/6 per cwt, red and white lead 2/ per cwt, other kinds free; Tas. Lead ore, pig lead, printing type and materials free, shot 9/4 per cwt, white and red lead and lead paint 4/8 per cwt, lead milled, sheet or piping 2/6 per cwt, other kinds 10% a v; Tr. All kinds 4% a v; WA. Lead, pig, sheet, and piping 2/6 per cwt, shot 5/ per cwt, brewery and distillery plant, type, 5% a v, other kinds 12½% a v.

Leather and Leather Wares.—See Hides and Skins.

Leggings.—See Hides, &c.

Lime.—See Bleaching Materials; also Cement.

Linen, Hemp and Jute Yarns and Thread.—See Yarns and Thread (Linen, Hempen and Jute).

Linen, Hemp and Jute.—See Woven Manufactures.

Machinery.—See Brass, Copper, &c., also Earthenware, also Grindstones, also Iron, &c., also Lead, &c., also Zinc, &c.

Magazines.—See Paper, &c.

Manures.—See Alkali, also Oil Cake.

Matches, Lucifer and Wax.—B. Boxes containing 100 matches each, and so in proportion, 1/ per gross; BG. Matches, per gross of boxes 60 cts.; CGH. In boxes of not more than 100, and so in proportion for larger boxes, 2/ per gross; C. 6½% a v; I. Free; JA. Boxes containing 100 matches each, and so in proportion, 5/ per gross; M. 6½% a v; N. In boxes, &c., of not more than 100, 1/ per gross, other 5% a v; NF. 13% a v; NSW. Free; NZ. 25% a v; Q. 7½% a v; SA. 1/ per gross (except safety matches or part thereof); (NT.) Free; Tas. Wax vestas 3/ per cubic foot, lucifer matches 1/ ditto; Tr. Matches, lucifer-boxes, or packages of not more than 120 matches and in proportion above that number, 2/6 per gross; WA. 12½% a v.

Mattresses.—See Household Furniture.

Medals.—See Gold and Silver Ware.

Metal Sheathing.—See Brass, Copper, &c.

Methylated Spirit.—See Spirits.

Mills.—See Iron, &c.

Millinery.—See Linen, &c, also Woven Manufactures.

Millstones.—See Grindstones.

Mining Machinery.—See Iron, &c. (Machinery).

Mirrors.—See Glass.

Molasses.—See Sugar.

Musical Instruments.—See Brass, Copper, &c.

Nails.—See Brass, Copper, &c., also Iron &c.

Newspapers.—See Paper, &c.

Nitrates.—See Alkali, also Saltpetre.

Oil Cake and Meal.—B. Oil meal and cake 5½d cwt; BG. Manure free, other 7% a v; CGH. 15% a v; C. Copperah and castor-seed Poonac free, Poonac 5½d cwt; Hon. Per lb, oilcake and meal ½d; I. Free; JA. Free; M. Copperah, or Poonac, free, other kinds 6½% a v; N. 5% a v; NF. 13% a v; NSW. Free; NZ. Free; Q. As manure, free, other 7½% a v; SA. Free; Tas. Oil cake, linseed free, other 10% a v; Tr. Oil meal 1/1½ per cwt, oil cake free; WA. 12½% a v.

Oil Cloth.—See Linen, &c.

Oil Paintings.—See Pictures.

Oils, per gall.—B. Kerosine 2½d, other kinds 4% a v; BG. Oils giving off inflammable vapour at 73° F. per gall 2/6, gasoline and all other (except essential, medicinal, perfumed and castor oil) per gall 1/0½; CGH. Fish oils (raw), produce of Africa, free, chemical, essential, perfumed and castor 15%, other 6d gall; C. Kerosine, linseed and vegetable 6½% a v, other free; Hon. Per lb, animal, mineral and vegetable ½d; I. Free; JA. 9d; M. 6½% a v; N. Kerosine and linseed 3d; other oils in ½ gall vessels 6d; all others 5% a v; NF. Palm 5% a v, kerosine 3d per gall, other 13% a v; NSW. Animal, black, cocoanut and sperm free, other 6d; NZ. Fish, olive and palm

- Pitch.**—B. Free; BG. Tar and pitch $2\frac{1}{2}$ per barrel; CGH. 15% a v; C. $6\frac{1}{2}$ % a v; Hon. $\frac{1}{2}$ d per lb; I. Free; Ja. $12\frac{1}{2}$ % a v; M. $6\frac{1}{2}$ % a v; N. 5% a v; NF. 8% a v; NSW. Free; NZ. Free; Q. $7\frac{1}{2}$ % a v; SA. Free; Tas. Free; Tr. Free; WA. 5% a v.
- Plaster.**—See Cement.
- Plate.**—See Gold and Silver Wares.
- Plate Glass.**—See Glass.
- Ploughs.**—See Iron, &c. (Machinery).
- Porcelain.**—See Earthenware and Porcelain.
- Pork, Salted, per cwt.**—B. $5\frac{7}{8}$; BG. Pork, pickled, \$1.50 per barrel of 200 lbs; CGH. $9\frac{1}{4}$; C. $2\frac{1}{4}$; I. Free; Ja. 15/ per barrel of 200 lbs; M. $2\frac{1}{4}$; N. $9\frac{1}{4}$; NF. $2\frac{1}{4}$; NSW. Free; NZ. Free; Q. $7\frac{1}{2}$ % a v; SA. Pickled 28/ (NT.) Pickled 10% a v, other $9\frac{1}{4}$ per cwt; Tas. 10% a v; Tr. Free; WA. 10% a v.
- Portable Engines.**—See Iron, &c. (Machinery).
- Printers' Materials.**—See Lead, &c.
- Printing Materials.**—See Paper, &c.
- Propellers.**—See Brass, Copper, &c.
- Pumps.**—See Brass, Copper, &c.; also Iron, &c.; also Lead, &c.
- Rails.**—See Iron, &c.
- Railway Materials.**—See Iron, &c.
- Reaping Machinery.**—See Iron, &c. (Machinery).
- Ribbons.**—See Woven Manufactures.
- Rice.**—See Corn.
- Rings.**—See Gold and Silver Ware.
- Rivets.**—See Iron, &c.
- Roofing Slates.**—B. 4% a v; BG. $4\frac{1}{2}$ per 1,000; CGH. 15% a v; C. Free; I. Free; Ja. Free; M. Free; N. Free; NF. 13% a v; NSW. Free; NZ. Free; Q. $7\frac{1}{2}$ % a v; SA. Free; Tas. 10% a v; Tr. Free; WA. $12\frac{1}{2}$ % a v.
- Rosin.**—B. Free; BG. $2\frac{1}{2}$ per barrel; CGH. 5% a v; C. Free; Hon. $\frac{1}{2}$ d per lb; I. Free; Ja. Free; M. $6\frac{1}{2}$ % a v; N. 7% a v; NF. 8% a v; NSW. Free; NZ. Free; Q. $7\frac{1}{2}$ % a v; SA. Free; Tas. Free; Tr. Free; WA. 5% a v.
- Rubber.**—See Indiarubber.
- Rum.**—See Spirits.
- Saddlery and Harness.**—See Hides and Skins.
- Sail Cloth.**—See Linen, &c.
- Sails, &c.**—See Cottons, &c.
- Sal Ammoniac.**—B. 4% a v; BG. 7% a v; CGH. 15% a v; C. $6\frac{1}{2}$ % a v; I. Free; Ja. $12\frac{1}{2}$ % a v; M. Ammoniacal liquors and salts free; N. 5% a v; NF. 13% a v; NSW. Free; NZ. As drugs and druggists' sundries 15% a v, other free; Q. $7\frac{1}{2}$ % a v; sulphate ammonia free; SA. 10% a v; Tas. 10% a v; Tr. Free; WA. $12\frac{1}{2}$ % a v.
- Salt.**—B. Free; BG. Free; CGH. In bulk or bags of not less than 100 lbs $3\frac{1}{2}$ d per cwt, all other free; C. 4/ per cwt, manufacturers free; I. Imported into British Burma $2\frac{3}{4}$ d per cwt, other parts of British India $3\frac{1}{4}$ d per cwt; Ja. Rock salt free, other $1\frac{1}{2}$ per cwt; M. $6\frac{1}{2}$ % a v; N. Salt free; NF. In bulk 10d per ton; NSW. 1/ per cwt; NZ. Free; Q. Free; SA. Rock free, other 1/ per cwt; Tas. 1/6 per cwt; Tr. Free; WA. Rock free, other 1/ per cwt.
- Saltpetre.**—B. 4% a v; BG. 7% a v; CGH. 15% a v; C. Saltpetre refuse for manure free, other $11\frac{1}{2}$ d per cwt; I. Free; Ja. $12\frac{1}{2}$ % a v; M. Nitrate of potash and soda free; N. 5% a v; NF. 13% a v; NSW. 1/ per cwt; NZ. Free; Q. 4/ per cwt; SA. 25/ per ton, (NT.) 1/ per cwt; Tas. 1/6 per cwt; Tr. Free; WA. $12\frac{1}{2}$ % a v.
- Sauces.**—See Pickles and Sauces.
- Sawing Machinery.**—See Iron, &c. (Machinery)
- Shawls.**—See Cottons, &c.
- Ships' Cables.**—See Iron, &c.
- Shot.**—See Lead, &c.
- Silk Yarns and Thread.**—See Yarns and Thread (Silk).
- Silk Woven Manufactures.**—See Woven Manufactures (Silk).

Silver.—See Gold and Silver Wares.

Silver Leaf.—See Gold and Silver Wares.

Silver Wares.—See Gold and Silver Wares.

Slippers.—See Hides, &c.

Soaps (see also Perfumery).—B. $1\frac{1}{4}$ per cwt; BQ. Common $2\frac{1}{4}$ per cwt, perfumed $7\frac{1}{2}$ a v; CGH. Common brown, blue, yellow, or mottled od per 100 lbs, other $15\frac{1}{2}$ a v; C. $6\frac{1}{2}$ a v; Hon. Common $\frac{1}{2}$ per lb, scented $4\frac{1}{2}$; I. Free; Ja. $6\frac{1}{2}$ per cwt; M. $6\frac{1}{2}$ a v; N. $5\frac{1}{2}$ a v; NF. $13\frac{1}{2}$ a v; NSW. Free; NZ. Common $\frac{1}{6}$ per cwt, scented and fancy $25\frac{1}{2}$ a v, powder and washing powder $15\frac{1}{2}$ a v; Q. $10\frac{1}{2}$ per cwt; SA. Fancy $37\frac{1}{4}$ per cwt, other $9\frac{1}{4}$ per cwt, extract of soap and washing powders $18\frac{1}{8}$, (NT.) Fancy $10\frac{1}{2}$ a v, other $1\frac{1}{2}$ per cwt; Taa. Perfumed or fancy $41\frac{1}{8}$ per cwt, other $9\frac{1}{4}$ per cwt; Tr. $2\frac{1}{2}$ WA. Toilet $18\frac{1}{2}$ a v, other $3\frac{1}{2}$ per cwt.

Soda.—See Alkali.

Solder.—See Lead, &c.

Sowing Machines.—See Iron, &c. (Machinery).

Sperm Oil.—See Oils.

Spinning Machines.—See Iron, &c. (Machinery).

Spirits (see also Perfumery) per proof gall.—B. $4\frac{1}{2}$ a duty; BQ. $10\frac{1}{2}$; CGH. $3d$ to $6d$ Bruto weight, $3d$ per lb; I. $8\frac{1}{2}$; Ja. $1\frac{1}{2}$ M. $24\frac{1}{2}$; N. $9\frac{1}{2}$; NF. From $4\frac{1}{9}$ to $10\frac{1}{2}$, perfumed $20\frac{1}{2}$, methylated $5\frac{1}{2}$; SA. of any strength $15\frac{1}{2}$, methylated $3\frac{1}{2}$, perf other (per liquid gallon) $8\frac{1}{2}$; WA. $15\frac{1}{2}$, rendered unfit for human consumption (rectified, not medicinal) $20\frac{1}{2}$ per gall.

Additional on
($5\frac{1}{2}$; Hon.
(strength);
IZ. $14\frac{1}{2}$; Q.
fma. Spirits
Run $6\frac{1}{2}$,
other spirits
its of wine

Springs.—See Brass, Copper, &c., also Carriages.

Starch.—B. $1\frac{1}{2}$ per cwt; BQ. $7\frac{1}{2}$ a v; CGH. $15\frac{1}{2}$ a v; C. $6\frac{1}{2}$ a v; Hon. $\frac{1}{2}$ per lb; I. Free; Ja. $12\frac{1}{2}$ a v; M. $6\frac{1}{2}$ a v; N. $5\frac{1}{2}$ a v; NF. $13\frac{1}{2}$ a v; NSW. $9\frac{1}{4}$ per cwt; NZ. $\frac{1}{2}$ per cwt; Q. $9\frac{1}{4}$ per cwt; SA. $16\frac{1}{8}$ per cwt; NT. $9\frac{1}{4}$ per cwt; Taa. $9\frac{1}{4}$ per cwt; Tr. Free; WA. $12\frac{1}{2}$ a v.

Stationery.—See Paper, &c.

Stereotypes.—See Lead, &c.

Stoneware.—See Earthenware.

Straw Plaiting for Hats, a v.—B. $4\frac{1}{2}$; BQ. $7\frac{1}{2}$; CGH. $15\frac{1}{2}$; C. $6\frac{1}{2}$; I. Free; Ja. $12\frac{1}{2}$; M. $6\frac{1}{2}$; N. $5\frac{1}{2}$; NF. $13\frac{1}{2}$; NSW. Free; NZ. Free; Q. $7\frac{1}{2}$; SA. Free; Taa. $10\frac{1}{2}$; Tr. Free; WA. $12\frac{1}{2}$.

Sugar.—B. Raw free, refined, vacuum, crystallised free other $11\frac{1}{2}$ per cwt; BQ. Raw and refined $18\frac{1}{8}$ per cwt; CGH. $3\frac{1}{2}$ per 100 lbs; C. Raw $1\frac{1}{2}$ to $3\frac{1}{2}$ per cwt, refined $5\frac{1}{2}$; Hon. Sugar and molasses $\frac{1}{2}$ per lb; I. Free; Ja. Raw $11\frac{1}{2}$, refined $18\frac{1}{8}$ per cwt; M. Raw $6\frac{1}{2}$ a v, refined $4\frac{1}{2}$ per cwt; N. Raw $3\frac{1}{6}$ per cwt, refined $1d$ per lb; NF. Raw $12\frac{1}{6}$ per cwt, refined $18\frac{1}{9}$, bastard $14\frac{1}{7}$; NSW. Raw $5\frac{1}{2}$, refined $6\frac{1}{8}$, treacle $3\frac{1}{4}$ per cwt; NZ. Raw or refined $4\frac{1}{8}$ per cwt; Q. Raw $5\frac{1}{2}$, refined $6\frac{1}{8}$ per cwt; SA. Sugar free, molasses and treacle $3\frac{1}{2}$ per cwt, (NT.) Free; Taa. Raw $6\frac{1}{2}$ per cwt, refined, loaf and crushed $9\frac{1}{4}$, other $6\frac{1}{2}$ per cwt; Tr. Raw or refined $10\frac{1}{2}$ per cwt; WA. Sugar, molasses and treacle $4\frac{1}{2}$ per cwt.

Sulphur.—See Brimstone.

Syrups.—See Sugar.

Tallow.—See Grease.

Tar.—See Pitch.

Tarpaulins.—See Linen, &c.

Tee.—B. Per lb. $3d$; BQ. $6d$; CGH. $1d$; C. $5\frac{1}{2}$; I. Free; Ja. $1\frac{1}{2}$; M. $1d$; N. $6d$; NF. $3d$ per lb, with $20\frac{1}{2}$ a v; NSW. $3d$; NZ. $4d$; Q. $6d$; SA. $3d$ ($6d$ per lb in Northern Territory); Taa. $3d$; Tr. $6d$; WA. $4d$.

Telegraph Materials and Apparatus.—See Brass, Copper, &c., also Earthenware, also Glass, also Indianrubber.

Tents.—See Cottons, &c.; also Linen, &c.

Threads.—See Yarns.

Tiles.—See Earthenware, also Zinc, &c.

Timber.—Tr. Sawn or hewn 8 3 per 1,000 ft super, staves 12 per 1,000, wood hoops 3 per 1,000; N.S.W. (Ex-building and dye woods) dressed per 100 ft super 3/, rough 1/6, doors, sashes, &c., 2 each.

Tin and Tin Wares.—B. All kinds 4% a v; BG. All kinds 7% a v; CGH. Plate or sheet 5% a v, other 15% a v; C. Tin, cake or slab 11½d per cwt, tin plates 1/4½ per cwt, all other 6½% a v; Hon. ½d per lb; I. All kinds free; Ja. Stills, and parts of, free, other kinds 12½% a v; M. All kinds 6½% a v; N. Tin ore and tin plates free, other kinds 5% a v; NF. Sheet and block tin, and solder 10% a v, other kinds 13% a v; NSW. All kinds free; NZ. Tin, pig, bar, sheet, foil, and tinsmiths' fittings free, tinware 15% a v; Q. Tin plates and block tin free, other kinds 7½% a v; SA. Tubing 2/6 per cwt, tin ware and japanned ware, 25%, (NT.) 10% a v, other kinds, unwrought and wrought, free; Tas. Tin ores unmanufactured and plates free, other kinds 10% a v; Tr. Tin and tin ware 4% a v; WA. Tin block, plate, and foil 5% a v, all other 20% a v.

Tissues.—See Woven Manufactures.

Tobacco (Unmanufactured) per lb.—B. 1/; BG. 1/3 to 1/10½; CGH. 6d; C. 2 7-10d; Hon. 1/8; I. Free; Ja. 6d; M. 1/5; N. 6d; NF. 10d; NSW. For manufacture in the Colony 1/, otherwise 3/, unmanufactured 1/, cigars 6/, cigarettes 6/; NZ. For manufacture in the Colony 2/, otherwise 3/6; Q. 3/; SA. 1/7½, snuff 6/, (NT.) 1/; Tas. 2/; Tr. 9d; WA. 1/, for sheepwash 3d.

Tobacco (Manufactured), per lb.—B. 1/6; BG. 1/10½; CGH. 2/; C. 5½d; I. Free; Ja. 1/; M. 1/9½; N. 2/; NF. 10d, with 5% a v; NSW. 3/; NZ. 3/6; Q. cigars 5/6, cigarettes 6/; SA. 2/9, (NT.) 2/; Tas. cigars and cigarettes 6/, snuff 9/; Tr. 1/; WA. 3/.

Toilet Preparations.—See Perfumery.

Toys, a v.—B. 4%; BG. 7%; CGH. 15%; C. 6½%; I. Free; Ja. 12½%; M. 6½d; N. 5%; NF. Manufactures of wood 20%, other 13%; NSW. Free; NZ. 15%; Q. 7½%; SA. 10%; Tas. 10%; Tr. Free; WA. 12½%.

Tubing.—See Brass, Copper, &c.; also Indiarubber, &c.

Turpentine.—B. 4% a v; BG. crude 2/1 per gallon, spirits of, 9d per gallon; CGH. 1½d per gallon; C. Free; I. Free; Ja. 9d per gallon; M. 6½% a v; N. Imported in vessels of not less than half a gallon 6d per gallon, other 5%; NF. Crude 8% a v, other 13% a v; NSW. 1/ per gallon; NZ. 6d per gallon; Q. 6d per gallon; SA. 6d per gallon; Tas. 1/ per gallon; Tr. 1/ per gallon; WA. 6d per gallon.

Twine.—See Cordage; also Yarns.

Type.—See Lead, &c.

Umbrellas and Parasols.—B. 4% a v; BG. 7% a v; CGH. 15% a v; C. 6½% a v; I. Free; Ja. 12½% a v; M. 6½% a v; N. 7% a v; NF. 13% a v; NSW. Free; NZ. 15% a v; Q. 7½% a v; SA. 20%, parts (except covers) free; NT. 10% a v; Tas. 10% a v; Tr. 4% a v; WA. 12½% a v.

Valves.—See Brass, Copper, &c.

Vinegar.—B. 4% a v; BG. 7% a v; CGH. ½d per gallon; C. Acids free, other 6½% a v; I. Free; Ja. 12½% a v; M. 6½% a v; N. 5% a v; NF. 7½d per gallon; NSW. 6d per gallon; NZ. 6d per gallon; Q. In wood 9d per gallon, in bottle 1/ per gallon; SA. acetic acid containing not more than 33% of acidity 2/ per gallon, every extra 10% or part 8d per gallon, vinegar containing not more than 5% acidity 9d per gallon, for extra 1/ or part 2d per gallon, (NT.) 9d per gallon; Tas. 6d per gallon; Tr. Free; WA. 6d per gallon.

Wagons.—See Carriages.

Watches.—See Clocks and Watches.

Waterproofing.—See Indiarubber, &c.

Weaving Machines.—See Iron, &c. (Machinery).

Wheat.—See Corn.

Wheels.—See Carriages.

Wheelbarrows.—See Carriages.

Window Sashes.—See Zinc, &c.

Wines.—B. 9d per gallon in wood, in bottle, sparkling 2/, other 9d per gallon, with, in each case, 25% additional on duty; BG. Wines not exceeding 8/4 in value, in wood, and containing less than 26% proof spirit 2 1 per gallon, bottled 4/2 per dozen quarts, 2/1 per dozen pints;

Yellow Metal.—See Brass, Copper, &c.

Yarns and Thread (Cotton).—B. All kinds 4% a v; BG. All kinds 7% a v; CGH. All kinds 15% a v; C. All kinds 5% a v; I. All kinds free; Ja. All kinds 12½% a v; M. All kinds 6½% a v; N. All kinds 5% a v; NF. All kinds free; NSW. All kinds free; NZ. Sewing cottons and thread free, other kinds 15% a v; Q. Twine 9/4 per cwt, other kinds 7½% a v; SA. Spun yarn 3/ per cwt, knitting, embroidery and crochet 10% a v, sewing thread free; Tas. Candle cotton and spun yarn free, all other 10% a v; Tr. All kinds 4% a v; WA. All kinds 12½% a v.

Yarns and Thread (Linen, Hempen and Jute).—B. All kinds 4% a v; BG. All kinds 7% a v; CGH. All kinds 15% a v; C. 6½%; I. All kinds free; Ja. All kinds 12½% a v; M. All kinds 6½% a v; N. All kinds 5% a v; NF. Hemp yarn free, cordage 10%, other 17½%; NSW. All kinds free; NZ. Sewing thread, &c. free, other kinds 15% a v; Q. Twine 9/4 per cwt, other kinds 7½% a v; SA. Sewing thread and twine free, spun yarn 3/ per cwt, other 10% a v; Tas. All kinds 10% a v; Tr. All kinds 4% a v; WA. All kinds 12½% a v.

Yarns (Silk).—B. All kinds 4% a v; BG. All kinds 7% a v; CGH. All kinds 15% a v; C. All kinds 6½% a v; I. All kinds free; Ja. All kinds 12½% a v; M. 6½% a v; N. All kinds 5% a v; NF. All kinds 13% a v; NSW. All kinds free; NZ. Silk twist (shoemakers' and saddlers') and sewing silk free, other kinds 15% a v; Q. All kinds 7½% a v; SA. Free; Tas. 10%; Tr. All kinds 4% a v; WA. All kinds 12½% a v.

Yarns and Thread (Woollen and Worsted).—B. All kinds 4% a v; BG. All kinds 7% a v; CGH. All kinds 15% a v; C. All kinds 6½% a v; I. All kinds free; Ja. All kinds 12½% a v; M. All kinds 6½% a v; N. All kinds 5% a v; NF. Woollen and worsted yarn of all kinds 10% a v; NSW. All kinds free; NZ. Sewing threads free, other kind 15% a v; Q. All kinds 7½% a v; SA. Sewing free, spun yarn 3/ per cwt, all other 10% a v; Tas. All kinds 10% a v; Tr. All kinds 4% a v; WA. All kinds 12½% a v.

Zinc and Zinc Wares.—B. All kinds 4% a v; BG. All kinds 7% a v; CGH. All kinds 15% a v; C. Apparatus and parts of machinery free, zinc in cake or slab 11½d per cwt, zinc perforated 5/7½ per cwt, other kinds 6½% a v; Mon. ½d per lb; I. All kinds free; Ja. Pipes for conveying fluids, stills, or parts of, and parts of steam-engines and machinery free, other kinds 12½% a v; M. Machinery and apparatus for manufacture or improvement of produce, free, other kinds wrought and unwrought 6½% a v; N. All kinds 5% a v; NF. Zinc and zinc nails for sheathing vessels, nail strips for manufacture of cut nails, printing materials free, other kinds 13% a v; NSW. All kinds free; NZ. Zinc plain sheet free, sheet other than plain 15% a v, tiles, ridging, guttering, piping, and roll, 1/ per cwt, other manufactures 15% a v; Q. Zinc free, zinc ware 7½% a v; SA. Window sashes 2/6 per pair, tubing 2/6 per cwt, other kinds free; Tas. Ore, ingot, sheet, and plate free, other kinds 10% a v; Tr. All kinds 4% a v; WA. Zinc sheet 5% a v, other kinds 12½% a v.

TARIFF OF BRITISH NEW GUIANA.

Arrowroot, sago, tapioca, maizena, maccaroni, starch, corn-flour	per lb.	1d.
Aërated or mineral waters	per doz. pints	6d.
Beer, ale, porter, cider (in bottle)....	per 6 quarts or twelve pints	9d.
" " (in wood or jar)	per gallon	6d.
Biscuits (fancy or sweetened).....	per lb.	1d.
Blue	"	1d.
Bacon.....	"	1d.
Barley, split peas	"	1d.
Cordage and rope.....	per ton	10s.
Cigars and cigarettes, including wrappers.....	per lb.	4s.
Coffee, cocoa, chocolate, and chicory	"	2d.
Confectionery, including cakes, comfits, ginger, butterine, sweetmeats, and nuts of all kinds except cocoanuts, per lb.		2d.
Caps (percussion)	per 100	1d.
Cheese	per lb.	1d.
Candles	"	1d.
Cordials and syrups not included under spirits ..	per gallon	1s.
Dynamite	per lb.	3d.
Dates, figs, prunes, raisins, and other dried fruits ..	"	1d.
Fruits, bottled or in tins or jars	per doz. pints	1s.
Glue, gelatine, isinglass	per lb.	1d.
Hams and cured pork	"	1d.
Hops	"	1d.
Jams, jellies, and honey	"	1d.
Kerosine.....	per gallon	6d.
Lead, including shot and bullets.....	per cwt.	2s. 4d.
Methylated spirits	per gallon	2s.
Molasses and treacle.....	per cwt.	2s.
Malt	per bushel	6d.
Mustard	per lb.	1d.
Opium or any article containing any of the active ingredients thereof	per lb.	£1
Oils not otherwise enumerated.....	per gallon	6d.
Powder, sporting.....	per lb.	3d.
Pepper, mace, and other spices	"	1d.
Paper, brown, wrapping, and paper bags.....	per cwt.	2s.
Potted meat and extract of meat	per lb.	2d.
Rice	per ton	10s.
Spirits of the strength of proof or of greater strength than proof by Sykes' hydrometer	per proof gallon	12s.
Spirits and spirituous compounds under proof or of which the strength cannot be ascertained by Sykes' hydrometer	per gallon	12s.
Case spirits, reputed contents of two, three, or four gallons shall be charged :—		
Two gallons and under as two gallons.		
Over two gallons and not exceeding three, as three gallons.		
Over three and not exceeding four, as four gallons.		
Soap, hard and soft.....	per lb.	½d.
Salt, saltpetre, and soda crystals.....	per ton	10s.
Sugar	per cwt.	2s. 4d.
Tobacco, manufactured	per lb.	3s.
" " "trade" and unmanufactured	"	1s.
Tea	"	2d.

Whenever it appears to the satisfaction of the Governor in Council that the Governments of France and Spain, or either of them, have made changes in their tariff of duties imposed upon articles imported from Canada, in reduction or repeal of the duties now in force in the said countries, he may by proclamation order the whole or part of the duty or 30 per centum ad valorem imposed by this Act upon wines imported into Canada to be remitted as respects importations from the said countries, or from that one of the said countries by the Government of which such change in its tariff of duties has been made as aforesaid.

All medicinal preparations whether chemical or otherwise, usually imported with the name of the manufacturer, shall have the true name of such manufacturer and the place where they are prepared permanently and legibly affixed to each parcel by stamp, label, or otherwise; and all medicinal preparations imported without such names so affixed shall be forfeited.

DUTIABLE ARTICLES.

Absinthe	per gall.	\$2
Acid, acetic and pyroligneous, n.e.s., strength equal to 6 p.c. absolute acid	per gall.	15c. & 1c. add'l.
Acid for dyeing	"	25c. & 20 p.c., a.v.
Mixed		25 p.c., a.v.
Muriatic and nitric		20 p.c., a.v.
Phosphate	per lb.	3c.
Stearic	"	3c.
Sulphuric	"	1c.
" and nitric		25 p.c., a.v.
Advertising pamphlets, pictures, almanacks, periodicals, photographs, calendars, for advertising or not per lb.		6c. & 20 p.c., a.v.
Advertising bills	"	15c. & 25 p.c., a.v.
Alcohol.—Ethyl, hydrated oxide of, gin, n.e.s., rum, whiskey, bay rum, also amyl and methyl, alcohol or fusil oil, wood naphtha, pyroxylic and methylated spirits; arrack or palm spirit, brandy, cordials and liqueurs of all kinds, n.e.s.; mescal, pulque, rum shrub, schiedam, and other schnapps; tafia, angostura, and similar alcoholic bitters or beverages	per l. gall.	\$2
Ale in casks	"	10c.
Bottles	"	18c.
(6 qt. or 12 pt. bottles to be held to contain 1 Imperial gall.)		
Almonds, shelled	per lb.	5c.
Not shelled	"	3c.
Alpaca hair, manufactures of, including blankets, flannels of every description, cloths, knitting, fingering, worsted yarn, and hosiery, n.e.s.	"	10c. & 20 p.c., a.v.
Ammonia, spirits of, and sweet spirits of nitre, and nitrous ether	per gall.	\$2 & 30 p.c., a.v.
Aniline dyes, n.o.p.		10 p.c., a.v.
Animals, living cattle and sheep		30 p.c., a.v.
Hogs	per lb.	2c.
All living animals, n.e.s.		20 p.c., a.v.
Apple trees of all kinds	each	3c.
Apples, dried	per lb.	2c.
Green, with duty on barrel	per brl.	40c.
Articles not in this Dutiable List, or in Free List		20 p.c., a.v.
Asbestos, other than crude, and all manufactures		25 p.c., a.v.
Axes of all kinds, adzes, hatchets, and hammers, n.e.s.		35 p.c., a.v.
Axle grease	per lb.	1c.
Axles, iron or steel car, axle bars, blanks or forgings for axles, and car springs of all kinds, and n.e.s.	per ton	\$30 and not less than 35 p.c., a.v.
Axle bars, blanks, or forgings for carriages other than railway and tramway vehicles	per lb.	1c. & 30 p.c., a.v.
Bags, containing fine salt, from all countries		25 p.c., a.v.
Cotton n.e.s.		35 p.c., a.v.
Cotton, seamless	per lb.	2c. & 15 p.c., a.v.
Paper		35 p.c., a.v.
Bagatelle tables or boards with cues and boards		35 p.c., a.v.
Glass balls	per doz.	5c. & 30 p.c., a.v.
Barrels, containing petroleum, when such is chargeable with specific duty	each	40c.
Containing linseed oil	"	25c.
Barley	per bush.	15c.

Beans	per bush.	15c.
Baked in cans, not over 1 lb. each	per can	2c.
And for each lb. or fraction thereof over		2c.
Bed comforters or cotton bed quilts, not including woven quilts or counterpanes		35 p.c., a.v.
Beef, extract of, not medicated		25 p.c., a.v.
Bells of any description, except for churches		30 p.c., a.v.
Belts, surgical, or trusses, and suspensory bandages of all kinds		25 p.c., a.v.
Belting rubber, hose, packing mats and matting, and cotton or linen hose lined with rubber	per lb.	5c. & 15 p.c., a.v.
Belting, leather		25 p.c., a.v.
Blackberries, gooseberries, raspberries, and strawberries, n.e.s.—weight of package to be included in weight for duty	per lb.	3c.
Bibles, prayer books, psalm and hymn books		5 p.c., a.v.
Billiard tables, without pockets, 4 ft. 6 in. by 9 ft. or under each		\$22 50c.
Over 4 ft. 6 in. by 9 ft.	each	\$25
Biscuits of all kinds, not sweetened, including popcorn, preserved ginger, condensed milk, not sweetened, and condensed coffee with milk not sweetened		35 p.c., a.v.
Blacking, shoe, and shoemaker's ink, harness and leather dressing, and harness soap		30 p.c., a.v.
Blueing.—Laundry blueing of all kinds		30 p.c., a.v.
Books, printed periodicals, and pamphlets, n.e.s., not foreign		15 p.c., a.v.
Bookbinders' tools and implements, ruling machines and bookbinders' cloth		10 p.c., a.v.
Boots and shoes, n.e.s.		25 p.c., a.v.
Braces or suspenders and parts thereof		35 p.c., a.v.
Brass in bars and bolts, drawn, plain and fancy tubing		10 p.c., a.v.
Manufactures, n.e.s.		30 p.c., a.v.
Screws, called "woodscrews," 2 in. or over in length	per lb.	6c.
1 in. and less than 2 in.	"	8c.
Less than 1 in.	"	11c.
Strips for printers' rules, not finished, and brass in strips or sheets, of less than 4 in. width		15 p.c., a.v.
Wire		15 p.c., a.v.
Wire-cloth		20 p.c., a.v.
Breadstuffs, grain, flour, and meal of all kinds when damaged by water in transitu, upon the appraised value		20 p.c., a.v.
Such appraised value to be ascertained as provided by sections 8, 71, 72, 73, 74, 75, and 76 of the "Customs Act."		
Brick for building		20 p.c., a.v.
British copyright works, reprints of		15 & 12½ p.c., a.v.
Bronze, phosphor, in blocks, bars, sheets and wire		10 p.c., a.v.
Brooms, pails, tubs, churns, brushes, and manufactures of wood, n.e.s., and wood pulp		25 p.c., a.v.
Buckwheat	per bush.	10c.
Flour or meal	per lb.	½c.
Buggies of all kinds, farm waggon, farm, railway or freight carts, pleasure carts, or gigs and similar vehicles costing less than \$50	each	\$10 & 20 p.c., a.v.
Costing \$50 and less than \$100	"	\$15 & 20 p.c., a.v.
All such carriages, costing \$100 each and over		35 p.c., a.v.
Children's carriages of all kinds		35 p.c., a.v.
Railway cars, sleighs, cutters, wheelbarrows, and handcarts		30 p.c., a.v.
Bushes, raspberry, blackberry, and gooseberry	each	1c.
Rose, costing 20c. and less	"	3c.
Butter	per lb.	4c.
Buttons of hoof, rubber, vulcanite or composition	per gross	5c. & 20 p.c., a.v.
Of vegetable, ivory or horn	"	10c. & 20 p.c., a.v.
All n.e.s.		25 p.c., a.v.
Button covers, crozier		10 p.c., a.v.
Cages, bird		35 p.c., a.v.
Candles, tallow	per lb.	2c.
Paraffine wax	"	5c.
Other, including sperm		25 p.c., a.v.

Cane or rattan, split or otherwise manufactured	25 p.c., a.v.
Canned meats.—Dried or smoked preserved in any other way than by being salted or pickled, n.e.s. ....per lb.	3c.
If imported in tins, weight to include weight of tin.	
Cans or packages made of tin or otherwise containing fish admitted free of duty, not exceeding 1 qt. in contents per can or package	1½c.
Exceeding 1 qt. ....per qt.	1½c.
Canvas of hemp or flax and sail twine for ships' sails	5 p.c., a.v.
Caps, hats, muffs, tippets, capes, cloaks, and other manufactures of fur	25 p.c., a.v.
All n.e.s.	30 p.c., a.v.
Caplins, unfinished Leghorn hats	20 p.c., a.v.
Carpets.—Brussels, tapestry, Dutch, Venetian and damask; mats and rugs of all kinds, n.e.s.; and printed felts and druggets and all carpets and squares, n.o.p.	25 p.c., a.v.
Smyrna carpets, mats and rugs	30 p.c., a.v.
Jute carpeting or matting and mats, linings and stair pads	25 p.c., a.v.
Treble ingrain three-ply and two-ply carpets of wool per sq. yd.	10c. & 20 p.c., a.v.
Two-ply and three-ply ingrain carpets, the warp being wholly of cotton or other than wool, worsted or hair of Alpaca goat.....per sq. yd.	5c. & 20 p.c., a.v.
Cartridges for gun, rifle, and pistol, and all cartridge cases, percussion caps and gun wads of all kinds	35 p.c., a.v.
Cases for jewels and watches, silver and plated ware, and cutlery	10c. & 30 p.c., a.v.
Show cases	\$2 & 35 p.c., a.v.
Castings, malleable iron and steel, n.e.s. ....per ton {	\$25 and not less than 30 p.c., a.v.
Celluloid, moulded into sizes for handles of knives and forks, not bored, and balls and cylinders coated or not with tinfoil, but not finished or manufactured	10 p.c., a.v.
Cement, burnt and unground	7½c.
Hydraulic or water lime, including barrels ..per barrel	40c.
In bulk or bags	9c.
Portland or Roman shall be classed accordingly at specific rates.	
Raw or in stone	\$1
Chains (iron or steel) over 9-16ths inch diameter	5 p.c., a.v.
Cheese	3c.
Cherries and currants	1c.
Cherry trees of all kinds	4c.
Chicory, raw or green	3c.
Roasted or ground.....	4c.
China and porcelain ware.....	35 p.c., a.v.
Cider not clarified or refined	5c.
Clarified or refined	10c.
Cigars and cigarettes.....per lb.	\$2 & 25 p.c., a.v.
(Weight of cigarettes to include weight of paper.)	
Clocks and clock cases of all kinds	35 p.c., a.v.
Springs and movements	10 p.c., a.v.
Clothes wringers.....each	\$1 & 35 p.c., a.v.
Clothing of cotton or other material n.o.p. for, including corsets, &c., made by seamstress or tailor, also tarpaulin, plain or coated with oil paint, tar or other composition, n.e.s.	35 p.c., a.v.
Machine card	25 p.c., a.v.
Ready-made and wearing apparel of every description, including horse clothing shaped, of wool, worsted, or hair of Alpaca goat n.o.p. ....per lb.	10c. & 25 p.c., a.v.
Coal, bituminous, per ton of 2,000 lbs.....	60c.
Dust	20 p.c., a.v.
Tar and pitch	10 p.c., a.v.
Cocoa nuts	\$1
Direct importation.....	50c.
Desiccated, sweetened or not	8c.
Cocoa paste and chocolate and other preparations not sweetened.....per lb.	4c.
Containing sugar	5c.
Coffee, extract of, or substitutes therefor, of all kinds ..	5c.
Green, from United States	10 p.c., a.v.

Fibre ware, indurated, vulcanised, and all of like material.	30 p.c., a.v.
Files and rasps	35 p.c., a.v.
Fire-arms	20 p.c., a.v.
Fireworks	25 p.c., a.v.
Fish, foreign caught, imported otherwise than in barrels, whether fresh, dried, salted or pickled, not specially provided for	50c.
per 100 lbs.	
Anchovies and sardines, packed in oil or otherwise, in tin boxes not more than 5in. long and 4in. wide and 3½in. deep	5c.
In half boxes, not more than 5in. long, 4in. wide, and 1½in. deep	2½c.
In quarter boxes, not more than 4½in. long, 3½in. wide and 1½in. deep	2c.
per quarter box	
Otherwise imported	30 p.c., a.v.
Salmon pickled or salted, and mackerel and smoked and boneless fish	1c.
per lb.	
Herrings, pickled or salted	½c.
Preserved in oil, except anchovies and sardines	30 p.c., a.v.
Salmon and all other fish prepared or preserved, including oysters, not specially provided for	25 p.c., a.v.
All other, pickled or salted in barrels	1c.
per lb.	
Oysters, shelled, in bulk	10c.
per gallon	
Canned, in cans not over 1 pint, including cans ..	
per can	3c.
Over 1 pint and not over 1 quart including can	
per can	5c.
Exceeding 1 quart in capacity	5c.
per quart	
Oysters in the shell	25 p.c., a.v.
Packages containing oysters or other fish, n.o.p.	25 p.c., a.v.
Fishing rods	30 p.c., a.v.
Fixtures, gas, coal, oil, or kerosene	30 p.c., a.v.
Flasks and phials of 8oz. capacity and over, telegraph and lightning rod insulators, jars, pressed or moulded table ware	5c. & 30 p.c., a.v.
per 1 doz. pieces	
Flasks and phials of less than 8oz. capacity	30 p.c., a.v.
Flax fibre, scrutched	1c.
per lb.	
" hackled	2c.
" tow of, scrutched or green	½c.
Flowers, artificial	25 p.c., a.v.
Flour, rice and sago	2c.
per lb.	
Rye	10c.
per bush.	
Starch	2c.
per lb.	
Wheat	75c.
per brl.	
Frames, picture, as furniture	35 p.c., a.v.
Freestone, rough, sandstone and all other building stone, except marble from the quarry, not hammered or chiselled	§1
per ton of 13 cubic ft.	
Granite and freestone, dressed; all other building stone, dressed, except marble, and all manufactures of	30 p.c., a.v.
Fruits in air-tight cans or other packages, weighing not over 1 lb.	
per can or package	3c.
Over 1 lb.	3c.
The rate to include duty on cans or packages, and weight on which duty shall be payable to include weight of cans or packages.	
Preserved in brandy or other spirits	1 §1'90
per l. gall.	
Furniture of wood, iron or other material, house, cabinet or office, finished or in parts, including hair and spring and other mattresses, bolsters and pillows, caskets and coffins of any material	35 p.c., a.v.
Fur skins, wholly or partially dressed	15 p.c., a.v.
Gas meters	35 p.c., a.v.
Glass, crystal and decorated table-ware, made for mounting with silver-plated trimmings, when imported by manufacturers of plated ware	20 p.c., a.v.
Common and colourless window glass; plain coloured, stained or tinted or muffed in sheets	20 p.c., a.v.
Ornamental figured, and enamelled coloured; painted and vitrified; figured enamelled and obscured white; and rough rolled plate	25 p.c., a.v.
Plate, in panes, not over 30 sq. ft., not coloured, per sq. ft.	6c.

And when bevelled, additional.....per sq. ft.	2c.
Over 30 and not over 70 sq. ft.....	8c.
And when bevelled, additional.....	2c.
Over 70 sq. ft.....	9c.
And when bevelled, additional.....	2c.
Silvered plate	30 p.c., a.v.
" " bevelled	35 p.c., a.v.
Stained windows.....	30 p.c., a.v.
All other manufactures of n.o.p., including bent plate	20 p.c., a.v.
Gloves and mitts of all kinds	35 p.c., a.v.
Glue, sheet, broken sheet and ground	3c.
Mucilage and liquid	30 p.c., a.v.
Gold and silver leaf, and Dutch or schlag metal leaf	30 p.c., a.v.
Grapes	2c.
Grindstones, not mounted, and not less than 12 ins. in diameter.....per ton	\$2
Gum, British, dressing, sizing cream, and enamel sizing per lb.	1c.
Gunpowder, blasting and mining	3c.
Cannon and musket, in kegs and barrels.....	4c.
Canister	15c.
Giant, dualin, dynamite, and other explosives in which nitro-glycerine is a constituent part....	5c. & 20 p.c., a.v.
Gun, rifle, and sporting, in kegs, half-kegs, or quarter-kegs and other similar packages.....	5c.
Gutta-percha, manufactures of	25 p.c., a.v.
Hair-cloth, of all kinds.....	30 p.c., a.v.
Curled	20 p.c., a.v.
Hammocks and lawn tennis nets and like articles manufactured of twine, n.e.s.....	35 p.c., a.v.
Handkerchiefs, cotton or linen, plain or printed, in the piece or otherwise	25 p.c., a.v.
Hardware, builders', cabinet-makers', harness-makers', and saddlers', including curry-combs, carriage hardware, locks, butts, and hinges, and saws of all kinds, n.e.s.	35 p.c., a.v.
House furnishing, n.o.p.	30 p.c., a.v.
Harness and saddlery of every description.....	35 p.c., a.v.
Honey, in the comb or otherwise, and imitations and adulterations thereof	3c.
Hoods, Manilla	20 p.c., a.v.
Hops	6c.
Horse clothing, shaped, n.o.p.	30 p.c., a.v.
Hubs, spokes, felloes, and parts of wheels, rough, hewn, or sawn only	15 p.c., a.v.
Indiarubber boots and shoes and other manufactures of, n.e.s.	25 p.c., a.v.
With tops or uppers of cloth, or other than rubber	35 p.c., a.v.
Surfaced waterproof clothing	10c. & 25 p.c., a.v.
Clothing, or clothing made waterproof with indiarubber, n.e.s.	35 p.c., a.v.
Vulcanised handles, for knives and forks.....	10 p.c., a.v.
Ink, for writing	25 p.c., a.v.
Instruments, surgical and dental	20 p.c., a.v.
Iron and steel angles, rolled iron or steel, channels structural shapes and special sections, weighing less than 25 lbs. per lin. yd., n.e.s. ....per lb.	½c. & 10 p.c., a.v.
Axles and springs, or parts thereof, axle bars, blanks, or forgings, for carriages other than railway and tramway vehicles.....	1c. & 30 p.c., a.v.
Axles for cars, axle bars, blanks, forgings, and car springs of all kinds, n.e.s. ....per ton	\$30 & not less than 35 p.c., a.v.
Bar iron, rolled or hammered, comprising flats, rounds, and squares, and bars and shapes of rolled iron, n.e.s.	\$13
Beams, rolled, girders, joists, angles, channels, structural shapes and special sections, not less than 25 lbs. per lin. yd.; and rolled beams, girders, joists, angles, channels, and eyebar blanks, made by Kloman process, together with all other structural shapes, including rolled bridge plate, not less than 15 ins. wide, when imported for use in the manufacture of bridges	12½ p.c., a.v.

Boiler or other plate iron, sheared or unsheared, skelp iron, sheared or in grooves, and sheet, common or black, not thinner than No. 20 gauge, n.e.s., including nail plate, 16 gauge and thicker	per ton	\$13
Bridges and structural work	per lb.	1½c. and not less than 35 p.c., a.v.
Cast iron vessels, plates, stove plates and irons, saddlers' and tailors' iron, and castings of, n.e.s.	per ton	\$16 and not less than 30 p.c., a.v.
Chains, over 9-16 in. diameter.....		5 p.c., a.v.
Cuttings or clippings, sheet or plate, fit only for re-rolling		30 p.c., a.v.
Engines, fire		35 p.c., a.v.
Locomotive and steam engines, boilers and machinery of iron or steel, n.e.s.		30 p.c., a.v.
Provided that any locomotive which, with its tender, weighs 30 tons or over, shall pay as duty not less than	each	\$2,000
Portable steam, threshers, and separators, saw and planing mills		35 p.c., a.v.
Ferro-manganese, ferro-silicon, spiegel, steel bloom and crop ends of steel rails, for manufacture	per ton	\$2
Files and rasps.....		35 p.c., a.v.
Fish plates, railway	per ton	\$12
Forgings, in whatever stage of manufacture, n.e.s.	per lb.	1½c. & 35 p.c., a.v.
Forks, cast iron, not handled, nor ground or otherwise further manufactured		10 p.c., a.v.
Hardware, builders', cabinetmakers', harnessmakers', and saddlers' hardware, including currycombs, carriage hardware, locks, butts, and hinges, n.e.s., saws and tools of all kinds		35 p.c., a.v.
Hay knives, and 4, 5, and 6 pronged forks of all kinds	per doz.	\$2 & 20 p.c., a.v.
Hoop, band, or scroll iron, 8 ins. or less in width, and not thinner than No. 20 gauge	per ton	\$13
Thinner than No. 20.....		12½ p.c., a.v.
Implements, agricultural, mowing machines, self-binding harvesters, harvesters without binders, binding attachments, reapers, sulky and walking ploughs, and others, n.o.p., for; and portable machines, steam engines, threshers, separators, horse powers, saw and planing mills		35 p.c., a.v.
Ingots, steel and clogged, blooms and slabs, by whatever process made, billets and bars, bands, hoops, strips, and sheets of all gauges and widths, n.e.s., valued at 4c. or less per lb.	per ton	\$12 & 30 p.c., a.v.
Ingots, clogged ingots, blooms and slabs ..	per ton	\$8
Over 4c. per lb.		12½ p.c., a.v.
Provided that on all iron or steel bars, rods, strips, or steel sheets, of whatever shape, and all irregular shape or section, cold rolled, hammered or polished in any way in addition to ordinary process of hot rolling or hammering, there shall be paid as additional	per lb.	1-6c.
Provided further, that all metal produced from iron or its ores, which is cast and malleable, of whatever kind, without regard to percentage of carbon contained therein, whether produced by cementation or converted, cast or made from iron or its ore by the crucible, Bessemer, pneumatic, Thomas-Gilchrist-basic, Siemens-Martin or hearth process, or by the combination of two or more of the processes or their equivalents, or by any fusion or other process which produces from iron or its ore a metal either granulous or fibrous in structure, which is cast and malleable, except malleable iron castings, shall be classed and denominated as steel.		
Provided further, that all articles rated as iron or manufactured of iron, shall be chargeable with the same rate of duty if made of steel, or of steel and iron combined, unless otherwise specially provided for.		

Knife blades or blanks, in the rough, unhandled, for use by electro-platers.....	10 p.c., a.v.
Malleable iron and steel castings, n.e.s. per ton	\$25 & 30 p.c., a.v.
Manufactures not enumerated, composed of iron or steel, partly or wholly manufactured	30 p.c., a.v.
Nail rods, Swedish rolled iron, under $\frac{1}{2}$ in. diameter for manufacture of horse-shoe nails.....	20 p.c., a.v.
Nails and spikes, composition and sheathing nails	20 p.c., a.v.
Cut nails and spikes of iron or steel.....per lb.	1c.
Wrought and pressed, galvanised or not, horse shoe, hob, and wire nails, and all other, n.e.s., and horse, mule, and ox shoes.....per lb.	1 $\frac{1}{2}$ c. & 35 p.c., a.v.
Needles, steel, cylinder, hand-frame and latch	30 p.c., a.v.
Nuts and washes, wrought iron or steel, rivets, bolts with or without threads, nut and bolt blanks, T and strap hinges and blanks, n.e.s. ....per lb.	1c. & 25 p.c., a.v.
Picks, mattocks, hammers weighing 3lbs. each or over, sledges, track tools, wedges or crowbars .....per lb.	1c. & 25 p.c., a.v.
Pig iron, iron kentledge, and cast scrap .....per ton	\$4
Pipe, cast iron, of every description.....	\$12 & 35 p.c., a.v.
Plate of iron and steel combined and steel not specially enumerated or provided for.....	30 p.c., a.v.
Plates engraved on wood only.....	20 p.c., a.v.
Plough plates, mould boards and land sides when cut to shape from rolled sheets of crucible steel, but not moulded, punched, polished or otherwise manufactured, more than 4c. per lb.....	12 $\frac{1}{2}$ p.c., a.v.
Printing presses and machines, used only in newspaper, book, and job-printing offices; folding machines and paper cutters	10 p.c., a.v.
Pumps, pitcher-spouts, cistern, well and force	35 p.c., a.v.
Rivets, bolts with or without threads, and nut or bolt blanks, less than $\frac{1}{2}$ in. diameter.....per lb.	1 $\frac{1}{2}$ c. & 30 p.c., a.v.
Rope, wire, n.o.p.	25 p.c., a.v.
Safes, doors for safes and vaults, scales, balances and weighing beams	35 p.c., a.v.
Scrap iron and steel, being waste or refuse, and fit only for remanufacture, not including cuttings or clippings which can be used without remanufacture	\$2
Screws, commonly called "wood screws," 2in. or over in length.....per lb.	6c.
1in. and less than 2in.....	8c.
Less than 1in.	11c.
Of iron, steel or other metal, n.o.p.	35 p.c., a.v.
Scythes	\$2 40c.
Sheet iron, common or black, smoothed or polished, coated or galvanised, thinner than No. 20 gauge, Canada plates, and plate or less than 30in. wide and $\frac{1}{2}$ in. thick	12 $\frac{1}{2}$ p.c., a.v.
Shovels and spades, and blanks, and iron or steel cut to shape for same	\$1 & 25 p.c., a.v.
Skates	20c. & 30 p.c., a.v.
Slabs, blooms, loops, puddled bars, or other forms less finished than iron in bars, and more advanced than pig iron, except castings.....per ton	\$9
Sprigs, brads, or cut tacks, not exceeding 16 oz. to 1,000	2c.
Over 16oz.....per lb.	2c.
Tubing, lap-welded iron, threaded and coupled or not, 1 $\frac{1}{2}$ in. to 2in. inclusive in dia., for use exclusively in artesian wells, petroleum pipe lines and refineries, under regulations to be made by the Governor in Council	20 p.c., a.v.
Not welded, nor more than 1 $\frac{1}{2}$ in. in dia. of rolled steel, wrought iron, threaded and coupled or not over 2in. in dia.	15 p.c., a.v.
Other tubes or pipes	1 $\frac{1}{2}$ c.
Wire, covered with cotton, linen, silk or other material	35 p.c., a.v.
Of all kinds, n.e.s.	25 p.c., a.v.
Jellies, jams and preserves, n.e.s. ....per lb.	5c.
Jewellery and manufactures of gold and silver	20 p.c., a.v.

Juices, lime and other fruit, n.o.p., non-alcoholic and not sweetened	per gall.	10c.
Lime juice sweetened, and fruit syrups, n.o.p. ..		40c.
Labels for fruits, vegetables, meat, fish, confectionery, and other goods, also tickets, posters, advertising bills and folders.....	per lb.	15c. & 25 p.c., a.v.
Laces, braids, fringes, embroideries, cords, tassels, and bracelets; chains or cords of hair; lace collars and all similar goods, lace nets, and nettings of cotton, silk, linen or other materials, boot, shoe and stay laces		30 p.c., a.v.
Lamp and ivory black		10 p.c., a.v.
Lamp, gas light and electric light shades, lamps and lamp chimneys, side and head lights; lantern globes, electric lights, gas lights, n.e.s., and lampwicks		30 p.c., a.v.
Lead, nitrate and acetate of, not ground.....		5 p.c., a.v.
Bars, blocks and sheets.....	per 100 lb.	60c.
Old, scrap and pig.....		40c.
Pipe and lead shot.....	per lb.	1½c.
Pencils of all kinds, in wood or otherwise		30 p.c., a.v.
Dry white and red, orange mineral, and zinc white....		5 p.c., a.v.
All manufactures of, n.e.s.		30 p.c., a.v.
Leather belting or other material		25 p.c., a.v.
Belting and upper leather, including kid, lamb, sheep, and calf, tanned but not dressed, waxed, or glazed ..		15 p.c., a.v.
Dressed, waxed, or glazed		20 p.c., a.v.
Cordova, tanned from horse hide, and manufactures of.		25 p.c., a.v.
Glove leathers, when imported by glove manufacturers for use in their factories—viz., kid, buck, deer, antelope, and water-hog, tanned or dressed, coloured or uncoloured		10 p.c., a.v.
Japanned, patent, or enamelled.....		25 p.c., a.v.
Sole	per lb.	½c. & 15 p.c., a.v.
„ tanned, but rough or undressed.....		10 p.c., a.v.
All other, and skins, tanned, n.o.s.		20 p.c., a.v.
All manufactures, n.e.s.		25 p.c., a.v.
Leatheroid and leather-board.....	per lb.	3c.
Liquorice paste		2c.
„ rolls or sticks		3c.
Lumber and timber, n.e.s.		20 p.c., a.v.
Maccaroni and Vermicelli		2c.
Machines, sewing, whole, or heads or parts of	each	\$3 & 20 p.c., a.v.
Magic lanterns and slides, philosophical, photographic, mathematical, and optical instruments, n.e.s.		25 p.c., a.v.
Malt, upon entry for warehouse, subject to excise regulations	per bushel	15c.
Malt, extract of (non-alcoholic), for medicinal purposes....		25 p.c., a.v.
Maps, geographical, topographical, and astronomical, and charts and globes, n.e.s.		20 p.c., a.v.
Marble, in blocks from quarry, in the rough or sawn on two sides only, and not specially shapen, containing less than 15 cubic feet.....		15 p.c., a.v.
Containing 15 cubic feet or over.....		10 p.c., a.v.
Sawn on not more than two sides		15 p.c., a.v.
Blocks and slabs sawn on more than two sides		25 p.c., a.v.
Finished, and all manufactures of, n.e.s.....		35 p.c., a.v.
Medicines, proprietary:—All tinctures, pills, powders, troches or lozenges, syrups, cordials, bitters, anodynes, tonics, plasters, liniments, salves, ointments, pastes, drops, waters, essences, oils, or medicinal preparations or compositions recommended to the public under any general name or title as specifics for any diseases or affections whatsoever affecting the human or animal bodies, n.o.p..		50 p.c., a.v.
All others		25 p.c., a.v.
Metal, babbit		10 p.c., a.v.
Britannia, manufactures of, not plated.....		25 p.c., a.v.
Composition, for manufacture of filled gold watch-cases		10 p.c., a.v.
Pins, manufactured from wire of any metal		30 p.c., a.v.
Type		10 p.c., a.v.
Mill-board, not straw-board.....		10 p.c., a.v.
Milk food, and similar preparations		30 p.c., a.v.
Molasses derived from raw cane-sugar, not refined or filtered, bleached or clarified, testing by the polariscope		

thirty degrees or over, and not over fifty-six, when imported direct without transshipment	per gall.	1½c.
When not so imported	"	4c.
Over fifty-six degrees, and imported direct without transshipment	per gall.	6c.
When not so imported	"	8c.
The package to be exempt from duty, provided that molasses, when imported for or received into any sugar refinery, sugar, syrup, or glucose factory, distillery, or brewery shall pay additional	per gall.	5c.
Mouldings of wood, gilded or otherwise further manufactured than plain		30 p.c., a.v.
Plain		25 p.c., a.v.
Music, printed, bound or in sheets	per lb.	10c.
Musical instruments of all kinds, n.o.p.		25 p.c., a.v.
Mustard, cake		20 p.c., a.v.
" ground		25 p.c., a.v.
Nails, brass and copper, rivets and burrs		35 p.c., a.v.
Newspapers, or supplemental editions or parts thereof, partly printed, and intended to be completed and published in Canada		25 p.c., a.v.
Nitro-glycerine	per lb.	10c.
Nutmegs and mace		25 p.c., a.v.
Nuts of all kinds, n.e.s.	per lb.	3c.
Oats	per bush.	10c.
Meal	per lb.	½c.
Oxides, ochres, and ochrey earths, fire-proofs, umbers, and siennas, ground or unground, washed or unwashed, calcined or raw		30 p.c., a.v.
Oils, coal and kerosene distilled, purified or refined; naphtha, benzole and petroleum; products of petroleum, Coal, shale and lignite, n.e.s.	per l. gall.	7 1-5th c.
Carbolic or heavy, for any use		10 p.c., a.v.
Cod liver, medicated		20 p.c., a.v.
Essential, for manufacturing		20 p.c., a.v.
Hair		30 p.c., a.v.
Lard		20 p.c., a.v.
Linseed or flax seed, raw or boiled	per lb.	1½c.
Lubricating, composed wholly or in part of petroleum and costing less than 30 c. per gall.	per gall.	7 1-5th c.
Lubricating, all other		25 p.c., a.v.
Neatsfoot		20 p.c., a.v.
Olive or salad		20 p.c., a.v.
Sesame seed		20 p.c., a.v.
Oil cloth for floor and oiled silk, in the piece, cut or shaped, oiled, enamelled, stamped, painted or printed, indiarubbered, flocked or coated, n.o.p.	per sq. yd.	5c. & 15 p.c., a.v.
Opium (crude), weight to include weight of ball or covering	per lb.	\$1
For smoking	"	\$5
Oranges and lemons, in boxes of capacity not exceeding 2½ cubic ft.	per box	25c.
In half boxes, not exceeding 1½ cubic ft.	per ½ box	13c.
In cases and all other packages	per c. ft.	10c.
In bulk	per 1,000	\$1 60c.
In barrels, not exceeding in capacity 196 lbs. flour barrel	per brl.	55c.
Organs, cabinet.—Reed, having not more than 2 sets of reeds	each	\$10
Over 2 and not over 4	"	\$15
Over 4 and not over 6	"	\$20
Over 6	"	\$30 & 15 p.c., a.v.
Pipe organs, and sets or parts of sets of reeds for cabinet organs		25 p.c., a.v.
Paintings, prints, engravings, drawings and building plans		20 p.c., a.v.
Paints, ground or mixed in or with either japan, varnish, lacquers, liquid driers, collodion, oil finish or varnish; rough stuff and fillers	per lb.	5c. & 25 p.c.,
The weight of package to be included in weight for duty.		
Paris green, dry		10 p.c., a.v.
N.e.a.		30 p.c., a.v.

Paper, albumenised, chemically prepared for photographers' use	25 p.c., a.v.
Sacks, of all kinds, printed or not.....	35 p.c., a.v.
Bank notes, bonds, bills of exchange, cheques, promissory notes, drafts, and all similar work unsigned; bill heads, envelopes, receipts, cards and other commercial blank forms, printed or lithographed, or printed from steel, copper, or other plates, and other printed matter, n.e.s.	35 p.c., a.v.
Hangings or wall papers in rolls, on each roll of 8 yds. or under, and so in proportion for all greater lengths, of the following description :—	
Brown and white blanks, printed or plain ungrounded per 8 yds.	2c.
White, ground, and satins, not hand-made ..	3c.
Single print and coloured bronzes	6c.
Embossed bronzes	8c.
Coloured borders, narrow, wide	6c.
Bronze borders, narrow, wide	14c.
Embossed borders	15c.
All other	35 p.c., a.v.
Manufactures of, including ruled and bordered, paper-ties, boxed, envelopes and blank books	35 p.c., a.v.
Sand, glass, flint and emery	30 p.c., a.v.
Tarred	½c.
Union collar cloth, in rolls or sheets, not glossed or finished	20 p.c., a.v.
Glossed or finished	25 p.c., a.v.
N.e.s.	25 p.c., a.v.
Peach trees	3c.
Pear trees, of all kinds.....	3c.
Pease	10c.
Perfumery, including toilet preparations (non-alcoholic), viz. :—Hair oils, tooth and other powders and washes, pomatums, pastes, and all other perfumed preparations, n.o.p., used for the hair, mouth or skin	30 p.c., a.v.
Pianofortes, square, whether round-cornered or not, not over 7 octaves	\$25
All other, square and upright.....	\$30
Concert, semi-concert, or parlour grand	\$50 & 20 p.c., a.v.
Parts of	25 p.c., a.v.
Pickles, in bottles, jars, or other similar vessels, including duty on bottles, &c.; and each bottle holding less than ½ pt. shall be dutiable as containing ½ pt.; holding more than ½ pt. but not more than 1 pt. shall be dutiable as containing 1 pt.; holding more than 1 pt. but not more than 1 qt., shall be dutiable as containing 1 qt.	40c.
In bulk in vinegar or in vinegar and mustard..	35c.
In brine or salt.....	25c.
Plants, viz., fruit, n.e.s., shade, lawn, and ornamental, and shrubs, n.e.s.	20 p.c., a.v.
Plaster of Paris, calcined or manufactured per 100 lbs.	15c.
Per brl. not over 300 lbs.	45c.
Ground, not calcined	10c.
Playing cards	6c.
Plumbago	15 p.c., a.v.
All manufactures of	30 p.c., a.v.
Plum trees of all kinds.....	3c.
Pomades, French or flower odours preserved in fat or oil for the purpose of conserving the odours of flowers which do not bear the heat of distillation, when imported in tins of not less than 10 lbs. each.....	15 p.c., a.v.
Pipes, drain, sewer, chimney linings or vents, and inverted blocks, glazed or unglazed and earthenware tiles	35 p.c., a.v.
Porcelain shades, imitations, and coloured glass shades, not figured, painted, enamelled, or engraved.....	20 p.c., a.v.
Pork, barrelled, in brine, made from the sides of heavy hogs after the hams and shoulders are cut off, and containing not more than 16 pieces to the barrel of 200 lbs. weight barrel to be free of duty	1½c.
Potash, red and yellow prussiate of	10 p.c., a.v.

Potatoes	per bush.	15c.
Poultry and game of all kinds		20 p.c., a.v.
Precious stones, n.e.s., polished, but not set or otherwise manufactured, and imitations thereof		10 p.c., a.v.
Prunella, for boots and shoes, and cotton netting for the lining of boots, shoes, and gloves		10 p.c., a.v.
Putty		25 p.c., a.v.
Dry, for polishing granite		20 p.c., a.v.
Quills		20 p.c., a.v.
Quince trees of all kinds	each	2½c.
Rakes, garden, two and three-pronged forks of all kinds, and hoes	each	5c. & 25 p.c., a.v.
Raisins	per lb.	1c.
Ribbons of all kinds and materials		30 p.c., a.v.
Rice	per lb.	1½c.
Uncleaned, unhulled, or paddy		17½ p.c., a.v.
Rye	per bush.	10c.
Flour	per brl.	50c.
Saccharine, or any product containing ¼ of 1 p.c. thereof per lb.		\$10
Sails for boats and ships, and tents and awnings		25 p.c., a.v.
Salt, fine, in bulk	per 100 lbs.	10c.
In bags, barrels or other packages, the bags, barrels or other packages to bear same duty as if imported empty	per 100 lbs.	15c.
Saltpetre		20 p.c., a.v.
Sand, iron, or globules		20 p.c., a.v.
Satchels, pocket-books, and purses		35 p.c., a.v.
Sauces and catsups in bottle	per gall.	40c. & 20 p.c., a.v.
In bulk	"	30c. & 20 p.c., a.v.
Seeds, viz., garden, field, and other, for agricultural or other purposes, n.o.p., when in bulk or large parcels In small papers or parcels		10 p.c., a.v.
Flax	per bush.	25 p.c., a.v.
Shawls and travelling rugs of all kinds and materials except silk		10c.
Shingles		25 p.c., a.v.
Silk in the gum, or spun, not more advanced than singles, tram and thrown organzine, not coloured		20 p.c., a.v.
Silk plush netting used for manufacture of gloves		15 p.c., a.v.
Silk velvets and all manufactures of silk, n.e.s., except church vestments		15 p.c., a.v.
Silver, German and nickel, and manufactures of, not plated		30 p.c., a.v.
Slate mantels		25 p.c., a.v.
Pencils		30 p.c., a.v.
Roofing, black or blue	per sq.	25 p.c., a.v.
School and writing	each	80c.
N.e.s.	per sq. ft.	1c. & 20 p.c., a.v.
Soap, common brown and yellow, not perfumed	per lb.	1c. & 25 p.c., a.v.
Perfumed or toilet (weight of inside packages and wrappers to be included in weight for duty) ..	per lb.	1½c.
Castile, mottled or white, and white	"	10c. & 10 p.c., a.v.
Powders, pumice, silver and mineral, sapolio (weight of package to be included in weight for duty)	per lb.	2c.
Socks or stockings of cotton, wool, worsted and hair of alpaca goat	per lb.	3c.
Soy	per gall.	10c. & 30 p.c., a.v.
Spectacles and eyeglasses, parts of		10c.
Do., unfinished		30 p.c., a.v.
Spices, viz., ginger of all kinds (except nutmegs and mace) unground		25 p.c., a.v.
Spirituous or alcoholic liquors distilled from any material, or containing or compounded from or with distilled spirits of any kind, and any mixture thereof with water, for every gallon thereof of the strength of proof, and when of a greater strength than that of proof at the same rate on the increased quantity that there would be if the liquors were reduced to the strength of proof. When the liquors are of a less strength than that of proof, the duty shall be at the rate herein provided, but computed on a reduced quantity of the liquors in proportion to the lesser degree of strength; provided, however, that no reduction in		

quantity shall be computed or made on any liquors below the strength of 15 per cent. under proof, but all such liquors shall be computed as of the strength of 15 p.c. under proof, as follows:—

Ethyl alcohol, hydrated oxide of ethyl, or spirits of wine; gin of all kinds, n.e.s.; rum, whiskey, and all spirituous or alcoholic liquors, n.o.p.	per gall.	\$2
Amyl alcohol or fusil oil, potato oil, and spirit.. ..	per gall.	\$2
Methyl alcohol, wood alcohol, wood naphtha, pyroxylic spirit, wood or methylated spirit; absinthe, arrack or palm spirit, brandy, including artificial brandy and imitations of; cordials and liqueurs of all kinds, n.e.s.; nescal, pulque, rum shrub, schiedam and other schnapps; tafia, angostura, and similar alcoholic bitters or beverages.	per gall.	\$2
Spirits and strong waters of any kind mixed with any ingredient or ingredients such as anodynes, elixirs, essences, extracts, lotions, tinctures, or medicines, n.e.s.	per gall.	\$2 & 30 p.c., a.v.
Alcoholic perfumes and perfumed spirits, bay rum, cologne and lavender waters, hair, tooth and skin washes and other toilet preparations containing spirits of any kind; in bottles or flasks weighing not more than 4oz. each.	per gall.	50 p.c., a.v.
In bottles, flasks or other packages weighing more than 4oz. each.	per gall.	\$2 & 40 p.c., a.v.
Nitrous ether, sweet spirits of nitre and aromatic spirits of ammonia.	per gall.	\$2 & 30 p.c., a.v.
Vermouth and ginger wine, containing not more than 40 p.c. of proof spirits.	per gall.	75c.
Containing more than 40 p.c.	per gall.	\$2
In all cases where the strength of any of the foregoing articles cannot be correctly ascertained by the direct application of the hydrometer, it shall be ascertained by the distillation of a sample, or in such other manner as the Minister of Customs directs.		
Wines of all kinds, except sparkling wines, including orange, lemon, strawberry, raspberry, elder and currant, containing 26 p.c. or less of spirits of the strength of proof, whether imported in wood or in bottles (6 qt. or 12 pt. bottles to be held to contain a gallon) per gall.	per gall.	25c.
Each degree of strength in excess of 26 p.c. until the strength reaches 40 p.c. additional ..	per gall.	3c. & 30 p.c., a.v.
Champagne and all other sparkling wines in bottles containing each not more than a quart, and more than one pint bottles.	per doz.	\$3
Containing not more than a pt., and more than $\frac{1}{2}$ pt.	per doz.	\$1 50c.
Containing $\frac{1}{2}$ pt. or less.	per doz.	75c.
Bottles containing more than 1 qt. each, shall pay additional for that in excess of 1 qt. per bottle—the qts. and pts. in each case being old wine measure.	per L. gall.	\$1 50c. & 30 p.c., a.v.
But any liquors imported under the name of wine, and containing more than 40 p.c. of spirits of the strength of proof by Sykes' hydrometer, shall be rated for duty as unenumerated spirits.		
Starch, including farina, corn or flour, and all preparations, not sweetened or flavoured.	per lb.	2c.
Sweetened or flavoured.	per lb.	4c.
(Weight of package to be included in weight for duty.)		
Stereotypes, electrotypes and celluloids of books, bases, and matrices and copper shells for same.	per sq. in.	2-3c.
Stereotypes, electrotypes and celluloids for almanacs, calendars, illustrated pamphlets, newspaper advertisements or engravings, and n.e.s., and matrices or copper shells for the same.	per sq. in.	2c.
Stereotypes, electrotypes, and celluloids of newspaper columns, and bases for same, wholly or partly of metal or celluloid.	per sq. in.	$\frac{3}{4}$ c.
Matrices or copper shells for same.	per sq. in.	2c.

Stones, flagged, sawn or otherwise dressed.....	per ton	\$2
Lithographic, not engraved.....		20 p.c., a.v.
Straw-boards, in sheets or rolls, plain or tarred, per 100 lbs.		40c.
Sugar, melado, concentrated melado, concentrated cane-juice, concentrated molasses, concentrated beet root juice and concrete, when imported direct from the country of growth and production, for refining purposes only, not over No. 14 Dutch standard in colour, and not testing over 70° by the polariscopic test.....	per lb.	1c.
For every additional degree above 70°, shown by polariscopic test.....	per 100 lbs.	3½c.
Sugar, not for refining purposes, not over No. 14 Dutch standard in colour, when imported direct from the country of growth and production.....	per lb.	1c. & 30 p.c.
All sugars above No. 14 Dutch standard in colour, and refined sugar of all kinds, grades, or standards.....	per lb.	1½c. & 35 p.c., a.v.
On all sugars not imported direct without trans-shipment from the country of growth and production, additional.....		7½ p.c.
Provided that when any cargo of sugar imported for refining purposes is found to grade, in part, above No. 14 Dutch standard in colour, such part to the extent of not exceeding 15 per cent. of the whole of the cargo may be admitted to enter by polariscopic test.		
Glucose or grape sugar, to be classed and rated for duty as sugar according to grade by Dutch Standard in colour.		
Sugar candy brown or white, and confectionery, including sweetened gums, candied peels, condensed milk when sweetened, and condensed coffee with milk when sweetened.....	per lb.	1½c. & 35 p.c. a.v.
Syrups, n.e.s., cane-juice, refined syrup, sugar-house syrup, syrup of sugar, molasses, sorghum, corn, glucose, and all bleached, clarified, filtered, or refined molasses....	per lb.	1c. & 30 p.c., a.v.
Tallow.....	"	1c.
Tea from United States.....		10 p.c., a.v.
Telephones and telegraph instruments, electric light cables, electric and galvanised batteries, motors and apparatus for electric lights, including incandescent light globes and insulators of all kinds.....		25 p.c., a.v.
Thread, cotton sewing, on spools.....		25 p.c., a.v.
In hanks, black, bleached or unbleached, 3 and 6 cords		12½ p.c., a.v.
Tinware and manufactures of tin, n.e.s.		25 p.c., a.v.
Stamped, japanned, granite, enamelled iron, and galvanised iron.....		35 p.c., a.v.
Tobacco, manufactured, n.e.s., and snuff.....	per lb.	30c. & 12½ p.c., a.v.
Cut.....	"	40c. & 12½ p.c., a.v.
Pipes of all kinds, mounts, cigar and cigarette holders, and cases for same.....		35 p.c., a.v.
Tomatoes, fresh.....	per bush.	30c. & 10 p.c., a.v.
Towels of every description.....		25 p.c., a.v.
Trunks, valises, hat boxes, and carpet bags.....		30 p.c., a.v.
Twine, cotton.....	per lb.	1c. & 25 p.c., a.v.
For harvest binders, of jute, manilla, or sisal, and manilla and sisal mixed.....		25 p.c., a.v.
N.E.S.		30 p.c., a.v.
Type for printing.....		20 p.c., a.v.
Umbrellas, parasols, and sunshades of all kinds.....		35 p.c., a.v.
Sticks or handles, n.e.s.		20 p.c., a.v.
Varnishes, lacquers, japans, japan driers, liquid driers, collodion and oil finish, n.e.s.	per gal.	20c. & 25 p.c., a.v.
Vegetables, when fresh, dry, or salted, n.e.s., including sweet potatoes and yams.....		25 p.c., a.v.
Velveteens, and cotton velvets and plush.....		20 p.c., a.v.
Vines, grape, costing 10c. and less.....	each	2c.
Wadding, cotton, batting, batts and warps, knitting yarn, hosiery, and other cotton yarns, under No. 40, not bleached, dyed or coloured.....	per lb.	2c. & 15 p.c., a.v.
Bleached, dyed or coloured.....	"	3c. & 15 p.c., a.v.
Walking sticks and canes of all kinds, n.e.s.		25 p.c., a.v.

Ware, plated, all other, electro-plated or gilt, of all kinds, whether plated wholly or in part	30 p.c., a.v.
Warp, cotton, No. 60, and finer.....	15 p.c., a.v.
" " on beams	1c. & 15 p.c., a.v.
Watches	25 p.c., a.v.
Actions or movements	10 p.c., a.v.
Cases	35 p.c., a.v.
Wax, paraffine, stearic acid, and stearine, of all kinds per lb.	3c.
Webbing, elastic.....	25 p.c., a.v.
" non-elastic.....	20 p.c., a.v.
Wheat	15c.
Flour	75c.
Whips of all kinds, except toy.....per doz.	50c. & 30 p.c., a.v.
Winceys of all kinds, n.o.p.	22½ p.c., a.v.
Checked, striped, or fancy cotton, over 25in. wide per sq. yard	2c. & 15 p.c., a.v.
Wire, of brass or copper	15 p.c., a.v.
Barbed	1½c
N.E.S.	25 p.c., a.v.
Wood, veneers of, not over 1-16th in. in thickness	10 p.c., a.v.
Wool, class 1—viz., Leicester, Cotswold, Lincolnshire, South Down combing wools, lustre, and others, such as are grown in Canada.....per lb.	3c.
Yeast cakes and baking powders, in packages weighing 1 lb. or over ; and compressed yeast, weighing not over 50 lbs. per lb.	6c.
In packages not less than 50 lbs.	4c.
" less than 1 lb.	8c.
Weight of package to be included in weight for duty.	
Zinc, chloride, salts and sulphate of.....	5 p.c., a.v.
Manufactures of, n.e.s.	25 p.c., a.v.
Seamless drawn tubing.....	10 p.c., a.v.
All goods not enumerated herein shall be charged, when imported into Canada, or taken out of warehouse for consumption therein	20 p.c., a.v.

FREE LIST.

Acid, boracic, oxalic, and tannic. Aconite. Agaric. Albumen, blood. Alkanet root, crude, crushed, or ground. Aloes, ground or unground. Alum, in bulk only, ground or unground. Aluminum, or aluminium and alumina and chloride of aluminium or chloralum, sulphate of alumina and alum cake. Amaranth, planks and boards of. Ambergis. Ammonia, sulphate of. Annato seed. Anatomical preparations and skeletons, or parts thereof. Anchors. Angles for ships. Aniline salts and arseniate of. Aniline and coal tar dyes, in bulk or packages, not less than 1 lb., including alizarine and artificial alizarine. Aniline oil, crude. Animals brought into Canada temporarily, for a period not exceeding three months, for the purpose of exhibition or competition offered by any agricultural or other association. Annato, liquid or solid. Antimony, not ground, pulverised, or otherwise manufactured. Apparel, wearing and personal and household effects, not merchandise, of British subjects dying abroad, but domiciled in Canada. Argal or argols, not refined. Articles for use of Governor-General, and Army and Navy:—Arms, military or naval clothing, musical instruments for bands, military stores and munitions of war, for use of Consuls-General who are natives or citizens of the country they represent, and not engaged in any other business or profession. Arsenic. Articles for Government Departments. Ashes, pot and pearl, in packages not less than 25 lbs. Asphalt asphaltum and bone pitch, crude only.

Baggage, travellers', under regulations prescribed by Minister of Customs. Bamboo reeds, cut into suitable lengths for walking sticks or canes, or for umbrellas, parasols, or sunshades, unmanufactured. Barilla. Bark, cinchona, hemlock, oak, and tanners'. Barrels of Canadian manufacture exported, filled with domestic petroleum and returned empty. Beams, iron or steel, for ships. Beans, viz., Tonquin, vanilla, and nux vomica, crude only ; cocoa, shells, and nibs, not roasted, crushed or ground ; locust and locust meal for manufacture of horse and cattle food. Bees. Bells for churches. Berries for dyeing. Bismuth, metallic, in its natural state. Blanketing and lapping, and discs, or mills for engraving copper rollers, when imported by cotton calico printers, and wall paper manufacturers. Bolting cloth, not made up. Bones, crude, not manufactured, burned, calcined, ground, or steamed. Bone dust and ash for manufacture of phosphate and fertilisers. Books, embossed, for the blind. Books printed in any of the languages or dialects of any of the Indian tribes of the Dominion of

Gannister. Gentian and ginseng root. Goldbeaters' moulds and skins. Grafting stock—viz., plum, pear, peach, and other fruit trees. Grass, manilla. Gravels. Grease, rough, refuse of animal fat, for manufacture of soap only. Guano and other vegetable manures. Gums—viz., amber, Arabic, Australian, copal, dammar, kaurie, mastic, sandarac, Senegal, shellac; and white shellac in gum or flake; and gum tragacanth, gedda, and barbery. Gut and worm gut, manufactured or not, for whip and other cord. Gutta-percha, crude. Gypsum, crude (sulphate of lime).

Hair, cleaned or not, but not curled or otherwise manufactured. Hatters' bands, bindings, tips and sides, and linings for use in factories. Hatters' plush, of silk or cotton. Hemp, India (crude drug). Hemp, undressed. Hides, raw, whether dry, salted, or pickled. Hoop iron, not exceeding $\frac{1}{2}$ in. in width, No. 25 gauge or thinner, used for manufacture of tubular rivets. Hoofs, horns, and horn tips. Horn strips for corset making. Hyoscyamus, or henbane leaf.

Ice. Illustrations of insects, pictorial, for use of colleges and schools, &c. Indigo, auxiliary or zinc dust, paste and extract of. Indian corn, known as "Southern White Dent Corn," or horse-tooth ensilage corn, and "Western Yellow Dent," when imported to be sown for soiling and ensilage. Indiarubber, unmanufactured. Iodine, crude. Iris, orris root. Iron liquor, a crude acetate of iron for dyeing and calico printing. Iron, sulphate of (copperas). Ivory and ivory nuts, unmanufactured; vaccine, points of; and veneer of, sawn only.

Jalap root. Junk, old. Jute. Jute butts. Jute cloth, as taken from loom, not pressed, mangled, calendered, or finished, not less than 40 ins. wide, for use in factories. Jute yarn, plain, dyed or coloured, for use in factories.

Kainite, or German potash salts, for fertilizers. Kelp. Kryolite, or cryolite, mineral.

Lac.—Dye, crude, seed, button, stick and shell. Lastings. Mohair cloth, for covering buttons exclusively. Lava, unmanufactured. Leaves, belladonna and buchu. Leeches. Lemon rinds, in brine. Litmus and all lichens, prepared or not. Lime, chloride of. Liquorice root, not ground. Litharge. Logs and round unmanufactured timber, n.e.p. for. Logs, measuring inside bark 11 ins. or less in dia. at butt end, for piling purposes. Lumber and timber planks and boards of coco-boral, boxwood, cherry, chestnut, walnut, sandalwood, gumwood, mahogany, sycamore, pitch-pine, Spanish cedar, rosewood, oak, hickory, white-wood, African teak, black heart ebony, lignum vitæ, red cedar, redwood, satin wood, and white ash, being not other than rough sawn or split; hickory billets for manufacture of axe, hatchet, hammer handles; wood of persimmon and dog-wood trees for manufacture of shuttles; hickory lumber sawn to shape for spokes of wheels; hickory spokes rough turned, not tenoned, mitred, throated, faced, sized, cut to length, round tenoned or polished.

Machinery, mining, imported within three years after passing of this Act. Madder and munjeet, or Indian, ground or prepared, and all extracts of. Mangane-
nese, oxide of. Manufactured articles of iron or steel, not being of a class manu-
factured in Canada, when imported for ship construction. Manuscripts. Masts,
iron, for ships, or parts of. Meerschauum, crude or raw. Menageries, horses,
cattle, carriages, and harness of, under regulations made by Treasury Board.
Metal, Britannia, in pigs and bars. Metal, tagging, plain, japanned, or coated,
in coils, not over $1\frac{1}{2}$ ins. in width, for use in factories. Metal, yellow, in bolts,
bars, and for sheathing. Metal, ores of, of all kinds. Mineralogical specimens.
Models of inventions and of other improvements in the arts. Molasses,
second process, derived from manufacture of "molasses sugar," for manufac-
ture of blacking, exclusively. Moss, Iceland, and seaweed, crude, or in their
natural state, or cleaned only. Musk, in pods or grains.

Newspapers, and quarterly, monthly, and semi-monthly magazines, and weekly literary papers, unbound. Nickel. Noils, being the short wool which falls from the comb in worsted factories. Nut galls.

Oakum. Oils, viz., cocoanut and palm, in their natural state. Otter, or attar of roses, and oil of. Oil cake, and meal, cotton-seed cake, seed, and palmit cake and meal. Orange rinds, in brine. Osiers. Oysters, seed and breeding, imported for Canadian waters.

Paintings in oil or water colours, the production of Canadian artists, under regu-
lations to be made by Minister of Customs, also by artists of well-known merit.
Palm leaf, unmanufactured. Paper, hemp, for manufacture of shot shells;
primers for manufacture of shot shells and cartridges, and felt board for gun
wads (provided that said articles when imported must be entered at the port of
Montreal, and at no other ports). Pearl, mother of, unmanufactured. Pelts, raw.
Persis, or extract of archill and cudbear. Philosophical instruments and apparatus,
i.e., not manufactured in the Dominion, when imported for use in universities,
college schools, &c. Phosphorus. Pitch (pine) in packages of not less than 15
galls. each. Plaits, straw, Tuscan and grass. Platinum wire; and retorts, pans,
condensers, tubing, and pipe, for use in works of manufacturers of sulphuric acid.
Potash, German mineral; and muriate and bichromate of, crude. Potash, chlorate

TARIFF OF GOLD COAST COLONY.

NOTE.—p.c., a.v. = per centum, ad valorem.

DUTIABLE ARTICLES.

All goods not otherwise provided for	10 p.c., a.v.
Ale and porter.....per gall.	1s.
Beads.....	10 p.c., a.v.
Boats and canoes	10 p.c., a.v.
Brandy	2s. 6d.
Brassware.....	10 p.c., a.v.
Bread and biscuits.....	10 p.c., a.v.
Building materials.....	10 p.c., a.v.
Cartridges, filled	5s.
„ unfilled	1s.
Cigars and cigarettes	1s.
Cider.....per gall.	1s.
Cordage	10 p.c., a.v.
Cotton goods	10 p.c., a.v.
Earthenware	10 p.c., a.v.
Flour.....	10 p.c., a.v.
Furniture	10 p.c., a.v.
Gin (all kinds).....per gall.	2s. 6d.
Gunpowder	6d.
Guns, pistols, &c.	2s.
Hardware	10 p.c., a.v.
Kerosine, and illuminating oils.....	10 p.c., a.v.
Lead	½d.
Liqueurs	2s. 6d.
Lumber.....	10 p.c., a.v.
Machinery, other than for mining and agriculture..	10 p.c., a.v.
Percussion caps	1s.
Perfumery	10 p.c., a.v.
Provisions	10 p.c., a.v.
Rice	10 p.c., a.v.
Rum	2s. 6d.
Silk goods	10 p.c., a.v.
Soap	10 p.c., a.v.
Spirits, all kinds.....per gall.	2s. 6d.
Sugar.....	10 p.c., a.v.
Tobacco, manufactured	1s.
„ unmanufactured	4d.
Wearing apparel	10 p.c., a.v.
Whisky	2s. 6d.
Woollen goods.....	10 p.c., a.v.
Wines.....per gall.	1s.

EXCEPTIONS.

Duty levied on articles imported into any part of Gold Coast Colony or of the protected territories lying east of the River Volta :—

Brandy, rum, liquors, spirits, strong water, not sweetened or mixed with any article so that the degree of strength cannot be ascertained by Sykes's hydrometer, when the degree of strength does not exceed proof.....per gall.	4d.
Gin	6d.
For every degree overproof.....	½d.
Tobacco.....per lb.	1½d.
Gunpowder	5s.
Guns	1s.

FREE LIST.

Acids. Agricultural and gardening implements. All goods imported by the Governor for his private use. All goods imported with the sanction of the Governor for the service of any public department of the colony. Anchors and chains.

Bags and sacks. Bedding. Beef and pork. Bellows. Bells. Bitters, not being sweetened or mixed with spirits. Blacking. Blue indigo. Books, newspapers, and printed matter. Brooms. Buttons.

Calabashes. Candles. Canoes. Carriages and carts. Cash-boxes. Cattle. Chains. Chairs. Chalk. Charcoal. Chemicals. Clocks and watches. Clothing, passengers' personal. Coals. Coffins. Coins, British, and other legally current in the colony. Combs and brushes. Confectionery. Coopers' stores, including casks, puncheons, shooks, hoops, and rivets or hooks required for making them up.

Demijohns (empty). Drugs and medicines.

Educational appliances imported with the sanction of the Governor. Embroidery.

Filters. Flags. Flints,

Glassware. Goats and sheep.

Hand-bags and dressing-cases. Harness. Horses, mules, and asses.

India-rubber. Instruments, mathematical; do., musical; do., scientific; do., surgical. Ironware in pots, pans, and other cooking utensils.

Jewellery.

Lamps.

Machinery for mining and other agricultural purposes. Masts. Matches. Mats. Meat, fresh. Millinery. Mineral waters. Mirrors. Molasses.

Needlework.

Oakum. Oars. Oils, excepting kerosine and other illuminating oils.

Paints. Photographic apparatus and materials. Pictures. Pipes. Pitch and tar. Plants. Poultry. Purses.

Quicksilver.

Safes. Salts. Scales. Seeds. Shea butter. Show cards. Spirits, methylated, unfit for drinking and not to be used for strengthening other spirituous liquors. Stationery. Steam launches. Stones, grind; do., tomb. Straw manufactures,

Tallow. Tarpaulins. Tools. Toys. Trays. Trunks.

Umbrellas.

Velocipedes.

Wood manufactures, where not to be used as building materials or furniture.

TARIFF OF VICTORIA.

NOTE.—n.o.p. = not otherwise provided for ; p.c., a.v. = per centum, ad valorem.

Acetic, containing not more than 30 p.c. acidity, pint or lb.	3d.
„ for every 10 p.c. or part of, above 30 p.c., „	1d.
Muriatic, nitric, sulphuric .....cwt.	5s.
Advertising matter—See Paper ; Stationery.	
Aërated or mineral waters—See Waters.	
Agricultural implements—See Implements.	
Ale, porter, spruce, and other beer, cider, perry, per gall. or six reputed quart bott. or 12 reputed pt. bott.	9d.
Lager beer—See Beer.	
Almonds..... pint or lb.	2d.
Animals, live, viz. :—	
Bulls, cows, calves over six months old, heifers, oxen, steers (except working bullocks in teams) .. .each	5s.
Colts, fillies, geldings, horses, mares not in saddle or harness..... „	5s.
Sheep, whether rams, ewes, wethers, or lambs „	6d.
Pigs „	2s.
Apparel, wholly or partially made up from material con- taining wool, the duty on which is 30 p.c., a.v. on impor- tation	35 p.c., a.v.
Apparel, slops, under-clothing, and articles of attire, n.o.p., wholly or partially made up (except diving dresses, and boots, gloves, and helmets for such dresses)	25 p.c., a.v.
Appliances or instruments, surgical, enumerated in order of the Commissioner, and published in the <i>Government Gazette</i>	Free.
Arrowroot pint or lb.	2d.
Arts, works of	Free.
Articles, minor, used in manufactures, enumerated in order of the Commissioner and published in the <i>Government Gazette</i>	Free.
Asphyxiators for rabbit killing	Free.
Axles :—	
Common dray, with linchpins.....	25 p.c., a v.
Common nut, and others not enumerated—	
Up to 1½ in. diameter inclusive Arm	3s.
Above 1½ in. diameter inclusive..... „	4s. 6d.
Mail, patent, up to 1½ in. diameter inclusive „	4s. 6d.
„ „ above 1½ in. „	7s.
Other patent axles, with brass caps..... „	10s.
Bacon lb.	2d.
Baggage, passengers', cabin furniture and personal luggage	Free.
Bags and sacks (except gunnies and sugar mats), capacity of less than three bushels	6d.
Bags, fancy hand reticules, or travelling, and fittings.....	25 p.c., a.v.
„ woolpacks doz.	3s.
Beer—See Ale.	
„ lager..... doz. quarts	3s.
„ „ „ pints	1s. 6d.
Biscuits..... lb.	2d.
Blacking, including burnishing ink, dressing, harness polish and paste	25 p.c., a.v.
Blue lb.	2d.
Boots and shoes—English sizes of 1888 to be the standard (except children's 0 to 3, and slippers of straw only) viz. :	
Men's, No. 6 and upwards doz. pairs	£2 5s.
Youths' Nos. 2—5..... „	£1 10s.
Boys' Nos. 7—1..... „	£1 3s. 6d.
Women's, Nos. 3 and upwards..... „	£1 8s. 6d.
Girls', No. 11—2 „	£1 2s.
„ Nos. 7—10..... „	15s. 6d.
Children's, Nos. 4—6, and slippers..... „	6s.
With uppers of lasting or other material, not leather, with or without leather toe-caps but not goloshed or vamped with leather	11s.

Buggy tops (if of any other material)	each	£3
Carriage bodies in the white	"	£5
Carriages and other vehicles used in the conveyance of passengers or goods across the frontier which have been registered with the officers of Customs nearest the place where such carriage or other vehicle may ply or pass, and in such manner as the Commissioner may by any order from time to time approve		Free.
Casks or shoofs, new or second-hand		25 p.c., a.v.
Charcoal and coal (ground)		20 p.c., a.v.
Charcoal, animal (ground)		Free.
Cheese	lb.	2d.
Chinaware and porcelain (except photographic, scientific, and telegraphic materials)		15 p.c., a.v.
Clocks, and all parts thereof whether wholly or partly made up		20 p.c., a.v.
Clogs and pattens		20 p.c., a.v.
Clothing, horse. (See Rugs.)		
Cloths, oil and other floor-		20 p.c., a.v.
Coffee, cocoa, chicory, chocolate	lb.	3d.
Coffee, raw }		Free.
Cocoa " }		
Combs, toilet		10 p.c., a.v.
Confectionery, comfits, succades, sweetmeats ..	pint or lb.	2d.
Cordage (except unserviceable, when cut into lengths of not over 3 feet, metal cordage, coir yarn, reaper and binder twine), viz. :—		
Coir rope	cwt.	5s.
Other cordage, including engine packing (not being sheet), housing and seizing lines and spun yarn, cwt.		12s.
Reaper and binder twine. (See Twine.)		
Corks, cut	lb.	4d.
Druggeting. (See Carpeting.)		
Drugs, viz. :—		
Ammonia, carbonate of	pint or lb.	2d.
" liquid	"	2d.
Chlorodyne		25 p.c., a.v.
Coculus indicus	lb.	1s.
Glycerine, pure	"	3d.
" crude	"	1d.
Morphia	oz.	1s. 6d.
Nitrate of silver	"	6d.
Nux vomica	lb.	2d.
Strychnine	oz.	1s.
Earthenware, including packing (except photographic, scientific, and telegraphic materials) measuring outside the package as imported	cubic foot	8d.
Engines, portable, fixed on a locomotive boiler horizontally, and fitted up with wheels and shafts, suitable for transport on an ordinary road		25 p.c., a.v.
Engines, traction		Free.
Eggs	gross	2s.
Explosives (except fine meal powder, not sporting, in bulk and in packages of not less than 25 lbs. each), viz. :—		
Powder, sporting	lb.	3d.
" blasting	"	1d.
Gelatine and gelatine dynamite	"	1d.
Other explosives	"	4d.
Fancy goods, except artificial flowers		10 p.c., a.v.
Feathers for ornamental purposes		25 p.c., a.v.
Fillets, line, for bookbinders		10 p.c., a.v.
Fireworks		20 p.c., a.v.
Fish. (See Meats and Fish ; also Provisions.)		
Fittings, ships'		Free.
Frilling, ruffling, platings, ruchings		25 p.c., a.v.
Fruits and vegetables, dried or preserved	lb.	2d.
" preserved (not dried), packed in bottles, jars, or other vessels, as under :—		
Quarts and over a pint	doz.	6s.
Pints and over half-pints	"	3s.
Half-pints and smaller sizes	"	1s. 6d.
Over a quart and not exceeding a gallon	"	18s.

[illegible]

Hoods, felt pull-over hoods and felt for the manufacture of hats.....per doz.	5s.
Hops .....per lb.	8d.
Hosiery (except of cotton, linen, and elastic silk stockings for surgical purposes or otherwise specified)	25 p.c., a.v.
<i>Note.</i> —Hosiery means stockings, socks, and other machine or hand-knit covering for the feet or legs, and no other articles (sec. 7, Act 769).	
Implements, agricultural, including chaff cutters, cleaners, corn screens, corn crushers, cultivators, drills (seed), harrows, hay presses, hay rakes, horse rakes, horse hoes, maize shellers, mowers, ploughs, reapers, rollers (field), root cutters, seed sowers, smutters, strippers, stump extractors, threshers, wheat cleaners, winnowers.....	20 p.c., a.v.
Implements, agricultural, known as reapers and binders ..	Free.
Ink, burnishing. See Blacking.	
„ printing (coloured) .....per lb.	6d.
Inks, writing, liquid, or powder	10 p.c., a.v.
Instruments, musical (except action work in separate pieces, including rails and keys), including second-hand :—	
Pipe organs and all parts thereof, including pianoforte action, made up.....	25 p.c., a.v.
Pianos, upright	£5 0 0
„ square, grand, or semi-grand	£15 0 0
Harmoniums and cabinet organs, not otherwise enumerated	£3 0 0
Jams and Jellies .....per pint or lb.	3d.
Jewellery (except cameos and precious stones unset), viz. :—	
Rings of gold, finished or unfinished, but without cameos or precious stones set therein ..per dwt. troy	4s.
All other, including imitation, also cases and pencil cases	20 p.c., a.v.
Jute piece goods :—	
Not exceeding 3 ft. in width .....per yard	1d.
Exceeding 3 ft. in width	1d.
Jute piece goods.....	Free.
Lamps, lampware, and lanterns (except electroliers and gasaliers, otherwise dutiable as manufactures of metals) ..	25 p.c., a.v.
Lead, sheet, and piping .....per cwt.	2s. 6d.
Leather (except crust or rough tanned, viz. :—Calf, goat, hogskin, sheep, or kangaroo, when not exceeding seven pounds each skin; and English bend, sometimes called butt)	6d.
Do., viz. :—Kid, calf kid, mock kid, and patent calf ..	Free
Do., being furniture and bookbinding Morocco, roan, and paste grain skiver	1s.
Leatherware, harness, saddles, or articles made up of leather, or any manufacture of which leather is the most valuable part, including whips of any description, trunks, and portmanteaus, and leather cut into shapes n.o.p. ..	25 p.c., a.v.
Leather laces .....per lb.	1s.
Leaf, gold and silver.....	20 p.c., a.v.
Luggage passengers'. (See Baggage.)	
Macaroni and vermicelli (or reputed pint or lb.) ..pint or lb.	2d.
Marble and stone, wrought (except slate slabs not wholly manufactured, lithographic stones, and stones for milling and grinding purposes).....	20 p.c., a.v.
Matches and vestas :—	
Wax vestas :	
For every gross of metal boxes n.o.p., containing in each box :	
100 vestas or under	1s. 3d.
Over 100 and not exceeding 200 vestas	2s. 6d.
And so on per gross of metal boxes, for each additional 100 vestas or part thereof.....Additional	1s. 3d.
For every gross of paper, small round tin or other boxes, containing in each box :	
100 vestas or under.....	1s.
Over 100 and not exceeding 200 vestas	1s.
And so on per gross of boxes, for each additional 100 vestas or part thereof.....Additional	1s.

Wooden matches :		
For every gross of boxes, containing in each box :		
100 matches or under	6d.	
Over 100 and not exceeding 200 matches	12.	
And so on per gross of boxes for each additional 100 matches or part thereof.....	6d.	
Wood, safety	Free	
Mats	25 p.c., a.v.	
Matting, coir, jute.....	20 p.c., a.v.	
Meats and fish, ported; and meats, fish, soups, and vegetables, extracts of, or concentrated	20 p.c., a.v.	
Meats and fish, preserved, not salted, or dried, or preserved in brine (or reputed pint or lb.)	2d.	
Medicines, consisting of two or more ingredients mixed ready for use, not being in chemical combination, drugs and chemicals, packed ready for retail sale or for con- sumption, including medical compounds containing spirits not exceeding the strength of proof by Sykes' hydrometer; and all preparations recommended as beneficial for any portion of the human or animal body, or the cure or the treatment of any disease or affection whatever, and medicine chests or cases, with or without fittings	25 p.c., a.v.	
Metals, manufactures of, and machinery, n.o.p. (except portables engines)	35 p.c., a.v.	
Rolled girder and channel iron castings, viz. :		
Bars, fire	} ton	£3
Cylinders, hydraulic		
Pipes and connections for same		
Plates, tanks		
Weights, sash		
Wire barbed.....		
Metal ware, plated and mixed (except door handles, locks, shaft tips, stump and finger joints, and slot irons used in carriage building, harness mountings, and plated harness).....	20 p.c., a.v.	
Metals, manufactures of, and machinery, viz. :—		
Anchors. Anvils. Balances, spring to weigh up to 3 cwt. Bands, curtain. Bars, not machined and in the rough. Bell fittings. Bells, 6 inches and under. Bits (for harness). Blocks and types, printers'. Blowers for ventilating mines. Boilers, oval (cast-iron). Brass- foundry used in the manufacture of furniture. Bushes, patent roller, for blockmaking. Buttons. Caps, per- cussion. Cast-iron, being oval boilers, camp ovens, digesters, kettles, brazing, fry, maslin, preserving, sauce, or stew pans; Danish, French, glue, oval, plumbers', stock, and three-legged pots; tea kitcheners or fountains. Chaffcutter knives. Chains. Chains, curtain. Cloth, wire over 36 mesh. Concentrators, Frew's (for mining purposes). Conductors, lightning. Copper and copper- ware, being prepared plates for engravers and litho- graphers, silver-plated sheet, perforated sheet, rivets, washers. Cornices in piece. Crucibles. Cutlery, iron or steel. Detonators. Digesters (cast-iron). Door- fittings (except handles and plates). Fire-arms. Fittings (see bell, door, meters, pipes, tubes, window). Fittings, electric, viz., arc lamps without globes, carbons, incan- descent lamps, automatical resistors, transmitters, or transformers, and storage batteries. Fountains, tea (cast- iron). Furniture, brassfoundry used in the manufacture of. Hames. Handles, trunk. Hinges, except hook and eye and T. Hooks (brass). Hooks, cornice. Hooks, curtain. Hoop, not machined and in the rough. Iron, angle and T. Iron, sheet, corrugated. Irons, box and saw. Irons, stirrup. Kettles (cast-iron). Kitcheners. Tea (cast-iron). Knives, chaffcutter. Knives, reaping machine. Latches. Locks. Lightning conductors. Machinery for carding, spinning, weaving, and finishing the manufacture of fibrous material, and cards for such machinery. Machinery for telegraphic purposes. Machinery used in the manufacture of paper and for felting, including wire cloth and felts. Machines, viz.,		

button-making, eyelet, knitting, sheep-shearing, stitching, dairy refrigerators and separators. Machines, printing. Machines, sewing. Machines known as centrifugal cream separators. Note.—Exemption of machines does not apply to the motive-power thereof (if any). Meters, gas, internal fittings of, when imported in parts not put together. Mortars and pestles. Netting, wire, galvanised, machine-made. Ovens, camp (cast-irons). Pans (cast-iron), viz., brazing, fry, maslin, preserving, sauce, stew. Pestles and mortars. Pig. Pins, gimp. Pipes and tubes, viz., brass-cased, brazed copper, solid drawn, welded, and fittings for same, except cocks. Plate not machined and in the rough. Plates (copper) prepared for engravers and lithographers. Plates, decorated tin, for manufacturing tinware. Pots (cast-iron), viz., Danish, French, glue, oval, plumbers', stock, three-legged. Presses, printing. Primers. Pulleys under 4 inches. Rail, tram and railway. Reaping machine knives. Rings, curtain. Rivets, copper. Rod, not machined and in the rough. Saws of all kinds, but not the machinery connected therewith. Scales to weigh up to 3 cwt. Scrap. Screws, cork, galvanised, hand, table, wood. Sheet, not machined and in the rough. Sheet (copper), silver-plated. Sheet (copper), perforated. Slides, cornice. Spoke, not machined and in the rough. Spoons, iron or steel. Springs, buffer. Steelyards to weigh up to 3 cwt. Tacks, 1 inch and under. Tires of steel in the rough. Tools of trade, not being machinery (except napping, spalling, and quartz hammers, picks, mattocks, gas and blacksmiths' tongs, crowbars, mauls, wedges, soldering irons). Traps, vermin. Tubes and pipes, viz., brass-cased, brazed copper, solid drawn, welded, and fittings for same, except the cocks. Types, printer and brass. Washers (copper). Window fittings (except shutters, blinds, poles, and cornices). Wire not machined and in the rough.....		Free
Milk, preserved	pint or lb.	2d.
Mustard	lb.	2d.
Nails, horseshoe.....	cwt.	12s.
„ iron and steel (except for trunks and grindery) „		5s.
Nuts (except cocoanuts and candle-nuts)	lb.	2d.
Oil and paste, furniture		20 p.c., a.v.
Oils, in bulk (except cocoanut, fish of all sorts, mineral, refined, of which the point of ignition is below 80° Fahr., kerosene, palm, lubricating, of which the chief component part is mineral : and resin)	gall.	6d.
Do., viz., resin		Free.
Do., kerosine	gall.	6d.
Do., packed in bottles, jars, or other vessels not exceeding one gallon in size, as under :—		
Quarts and over a pint	doz.	4s.
Pints and over half a pint	„	2s.
Half pints as smaller sizes	„	1s.
Over a quart and not exceeding a gallon	„	12s.
Oilmen's stores (except essential oils and essences not containing alcohol) packed in bottles or jars not exceeding one reputed quart in size, or in canisters or vessels not exceeding one quart in size		20 p.c., a.v.
Do., not otherwise enumerated (except isinglass, uncut) ..		10 p.c., a.v.
Oleomargarine. (See Butterine.)		
Onions	ton	£1
Opium, including all goods, wares, and merchandise mixed or saturated with opium or with any preparation or solution thereof, or steeped therein respectively	lb.	£1
Packages in which goods are ordinarily imported not otherwise enumerated		Free.
Packages, second-hand, in which ships' stores have been imported.....		Free.
Paints and colours (except artists' colours):—		
Ground in oil, including patent dryers and putty ..	ton	£2
Mixed, ready for use, of any substance	„	£4

Paper (except writing and printing, in original wrappers and uncut edges, as it leaves the mill, paperhangings, and millboard):—

Cut.....lb.	2d.
Advertising matter, printed or lithographed, or any printed plates, lithographs, pictures, cards, or matter of a similar description used or capable of being used for advertising purposes.....lb.	4d.
Do., other.....cwt.	6s.
Do., bags....."	15s.
Do., cardboard, pasteboard....."	4s.
Parasols, sunshades, and umbrellas, with or without covers, made up wholly or in part, viz.:—	
From materials not containing silk.....each	1s.
From materials containing silk....."	2s. 6d.
Parasol, sunshade, and umbrella sticks when wholly or partly fitted with frames.....each	1s.
Paste, furniture. (See Oil.)	
Pattens. (See Clogs.)	
Peel, candied, drained or preserved.....lb.	2d.
Perfumery.....	20 p.c., a.v.
Pickles (packed in bottles, jars, or other vessels not exceeding one gallon in size) as under:—	
Quarts and over a pint.....doz.	3s.
Pint and over half a pint....."	2s. 6d.
Half pints and smaller sizes....."	1s.
Over a quart and not exceeding a gallon....."	12s.
Do., all other.....	20 p.c., a.v.
Pipes:—	
Iron. (See Metals.)	
Smoking, clay.....gross	1s.
Do., all others, and cigar and cigarette holders.....	25 p.c., a.v.
Cases for pipes, cigar and cigarette holders.....	25 p.c., a.v.
Platings. (See Frillings.)	
Plate of Gold.....oz. troy	8s.
" Silver....."	2s.
Potatoes.....ton	10s.
Powders, baking, seidlitz, washing.....	20 p.c., a.v.
Provisions (including vegetables), salted, dried, or preserved in brine (except fish n.o.p.).....cwt.	5s.
Quilts, sewn, cosies, and cushions.....	30 p.c., a.v.
Rice.....cental	6s.
Undressed, imported into any bonded warehouse, and dressed therein.....cental	4s.
Paddy....."	2s.
Rice, imported into any bonded warehouse and manufactured into starch therein.....	Free.
Rolls, ornamental, for bookbinders.....	10 p.c., a.v.
Ruchings. (See Frilling.)	
Ruffings. (See Frilling.)	
Rugs, waterproof, and horse-clothing.....	25 p.c., a.v.
Saddle-trees:—	
Harness.....doz.	10s.
Riding....."	£1
Salt (except rock salt).....ton	£1
Sauces, packed in bottles, jars, or other vessels not exceeding one gal. in size, viz.:—	
Quarts and over a pint.....per doz.	4s.
Pints and over a half-pint....."	2s.
Half-pints and smaller sizes....."	1s.
Over a quart and not exceeding a gal."	12s.
All other.....	10 p.c., a.v.
Seeds, canary.....	10 p.c., a.v.
Shot.....per lb.	1d.
Silks (except hatters' silk plush, umbrella silk, silk for flour dressing, silk flags, oil silk, fringes, tassels, and gimp for furniture, reps, damasks, and other materials for covering furniture) in the piece, or piece goods containing silk, whether cut into lengths or shapes or not.....	20 p.c., a.v.
Soap, perfumed, and toilet.....per lb.	4d.
" other....."	2d.
Soda crystals.....per ton	£2

Spices, ground(or reputed pint or lb.) per pint or lb.	2d.
Spirits * or strong waters of any strength not exceeding the strength of proof by Sykes' hydrometer, and so in proportion for any greater strength than the strength of proofper gall.	12s.
Spirits, cordials, liqueurs, or strong waters, sweetened or mixed with any article so that the degree of strength cannot be ascertained by Sykes' hydrometer (including all alcohol diluted or undiluted with water or other menstruum and containing in solution any essence, essential oil, ether, or other flavouring or other substance whether of natural or artificial origin)per gall.	12s.
Spirits, methylatedper liq. gall.	1s.
„ perfumedper gall.	£1 4s.
„ mixed with essential oils, so as to be unfit for human consumption, to be used in the manufacture of soap, under Commissioner's permit, provided the mixing is performed in the presence of an officer of Customs	Free.
Springs, sofa, chair, and other furniture	10 p.c., a.v.
Starchper lb.	2d.
Stationery manufactured as under :—	
Albums of all sorts	
Blotters, blotting cases, blotting pads, bill-heads, and all other printed, ruled, or engraved forms, or paper, bound or unbound, including printed or lithographed advertisement or posters of all kinds when framed . .	
Books :—account, betting, cheque, copy, diary, drawing, exercise, guard, letter, music, memo, pocket, receipt, sketch	
Bill files and letter clips	
Cards :—printers', visiting, funeral, menu, programme, wedding, in sheet or cut	20 p.c., a.v.
Card cases, not being of gold or silver	
Date cases, cards, calendars	
Envelopes	
Ink bottles, inkstands, ink wells	
Labels, luggage and other	
Memo slates and tablets	
Mounts or stands for pictures	
Parchment, cut	
Sketch blocks	
Wrappers, fancy, for writing paper	
Writing cases, desks, and stationery cases	
Stearineper lb.	2d.
Stone. (See Marble.)	
Sugar, the produce of sugar caneper cwt.	3s.
„ „ „ bonded on and after 27th day of July, 1887, and refined in Victoria in a bonded warehouse, under regulations to be framed by the Governor in Councilper cwt.	2s.
Sugar, the produce of beetroot, and all other sugar „	6s.
„ candy(or reputed pint or lb.) pint or lb.	2d.
„ molasses (except unrefined)per cwt.	3s.
Teaper lb.	1d.
Tents and tarpaulins	20 p.c., a.v.
Tiles. (See Brownware.)	
Timber and building materials (except ash, Australian and New Zealand pine, blackwood, cedar, hickory, oak, posts and rails, staves, sycamore, walnut, whitewood—undressed. Hardwood, undressed logs of the size of 9 ins. square or larger. California redwood, sugar pine. American white pine, undressed, 1 in. and over. All undressed of the size of 7 ins. by 2½ ins. or larger. Spokes and felloes of hickory in the rough. Spars in the rough) :—	
Architraves and mouldings of all sorts, wholly or partly prepared, under 3 ins.per 100ft. lin.	4s.
Architraves and mouldings of all sorts, wholly or partly prepared, 3 ins. and overper 100ft.	7s.

* Or 24s. for each reputed 2-gallon case, or 48s. for each reputed 4-gallon case, when the said cases respectively do not contain more than the reputed contents; and so on for each reputed gallon or part of a gallon.

Boards—flooring, lining, weather, dressed or planed per 100ft. sup.	1s. 6d.
Doors not exceeding 1½ in. in thickness each	5s.
" over 1½ in. and not exceeding 1¾ in. in thickness "	7s. 6d.
" " 1¾ in. in thickness "	10s.
Frames—door, window "	5s.
Hardwood per 100ft. sup.	2s.
Laths per 1,000	5s.
Palings per 100	9d.
Pickets, dressed "	6s. 6d.
" undressed "	6d.
Sashes—window, unglazed per pair	2s.
" " glazed "	3s.
Shingles per 1,000	9d.
Skirtings, wholly or partly prepared per 100ft. lin.	7s.
Spokes and felloes in the rough per 100	6d.
Staves, shaped or dressed 25 p.c., a.v.	2s. 6d.
Timber, of sizes less than 7 ins. by 2½ ins. per 100ft. sup.	25 p.c., a.v.
" bent 25 p.c., a.v.	25 p.c., a.v.
" finished 25 p.c., a.v.	25 p.c., a.v.
" cut into shapes, for making into cases, boxes, or similar articles per cubic foot	6d.
Tobacco (except sheepwash, including tobacco soaked on the landing thereof from the importing ship, or on delivery from the warehouse, in turpentine, oil, or other fluid in the presence of some officer of Customs, so as to render it unfit and useless for human consumption):—	
Manufactured lb.	3s.
Unmanufactured "	1s.
Cigars "	6s.
Snuff "	3s.
Tubs. (See Buckets.)	
Twine (except sewing or seaming of hemp, cotton or flax) "	2½d.
Twine, reaper and binder, and yarn made from jute, hemp or flax cwt.	8s.
Type holders for bookbinders 10 p.c., a.v.	
Umbrellas. (See Parasols.)	
Varnish, including lithographic gall.	2s.
Vegetables. (See Fruits, meats, and fish; also Provisions.)	
Vermicelli. (See Macaroni.)	
Vinegar, not being acetic acid or crude vinegar, aromatic or raspberry gall.	6d.
Watches, and all parts thereof, wholly or partly made up..	20 p.c., a.v.
Waters, aerated or mineral 10 p.c., a.v.	
Wickerware 25 p.c., a.v.	
Wine, sparkling gall.	8s.
" other "	6s.
<i>Note.</i> —Wine containing more than 25 p.c. of alcohol of the S.G. '825 at the temperature of 60° F. is charge- able with duty as spirits.	
Woodenware, including beehives, bellows, picture frames, and wooden hames, turnery (except billiard balls in the rough), staves, shaped or dressed, and finished timber not otherwise enumerated (except artists' materials), engravers' bookwood, shafts and poles in the rough, ash oars	
Woollen manufactures or manufactures containing wool (except printers' blankets and collar check), viz. :	25 p.c., a.v.
Blankets, blanketing, rugs and rugging 25 p.c., a.v.	
Piece goods, whether in the piece or cut into lengths or shapes, being vestings, trouserings, coatings, shirtings, broadcloths, witneys, naps, flannels, mantle cloths, cloakings, ulsterings, kerseys, serges, costume cloths, Melton cloths, and tweeds	30 p.c., a.v.
Woolpacks. (See Bags.)	
Wool piece goods, being collar and check	Free.

III.—FOREIGN COUNTRIES.

For the United States Tariff, see page 582.

ABBREVIATIONS.

A. = Austria.

Ar. = Argentine Republic. Articles not specified pay 25% a v; 1 peso = 100 centesimos (cts) = 4/2 kilo. 2'204 lbs.

B. = Belgium.

Br. = United States of Brazil. The additional import duties are denoted by an asterisk (*) The rates are given in milreis per kilog. (2'204 lbs.) where not otherwise stated. Milreis = 1000 reis = 2/1.

C. = Chili. Articles not specified pay 25% a v. Commencing on January 1st, 1889, a surtax of 50% will be levied on all duties payable.

Ch. = China. 1 pecul = 100 catties = 133 1/3 lbs avoirdupois; 1 chang = 10 Chinese ft. = 141 Engl. ins., 1 chang = 3 yds 9 ins.; 1 tael = 10 mace, 1 mace = 10 condareen, 1 condareen = 10 cash. The value of the tael varies at different ports in China from 5/9 to 6/8: t.m.c.c. 0'0'0'0

Cor. = Corea. All import duties are ad valorem.

D. = Denmark.

E. = Ecuador. A municipal tax in addition to tariff is levied on all imports.

F. = France

G. = Germany.

Gr. = Greece. Oke = 2'8 lbs; lepta = 9 1/2 d.

Hl. = Hawaiian Islands.

Hay. = Hayti. A surtax of 50%, and an additional 33 1/3% is levied upon the established duties in this tariff.

H. = Holland.

I. = Italy. Quintal 220'4 lbs; lire 9 1/2 d.

J. = Japan. Catty = 1 1/2 lb, cent = 1/16 of a boo, 1 boo = 1/11 of a dollar.

M. = Mexico. The rates are given in dollars: 1'00 = 4'2, 1 kilogramme = 2'204 lbs avoirdupois. NOTE.—By n.w. (net weight) the actual weight of the merchandise is understood; by l.w. (legal weight) that which includes, besides the "net weight," that of the interior bottles, boxes, winders, wrappers, &c., in which the articles are imported; and by g.w. (gross weight) the total weight of the packages. When merchandise, which pays according to the legal weight, has no other covering besides the one which forms the outside package, the actual weight of the merchandise will be considered to be its legal weight.

Nl. = Netherlands East Indies. Florin = 1/8, kilogramme = 2'204 lbs. Articles not specified pay 6% a v.

Nic. = Nicaragua.

N. = Norway. Kilo = 2'204 lbs, krone = 100, ore = 1'1 1/2 d.

Per. = Peru.

PR. = Porto Rico. Agricultural implements and machines, coal (vege-

table and stone), gold, silver and bullion (bars or money), are admitted free of duty. The rates are given in pesos: 1 peso = 100 centavos = 3/9. Duty per 100 kilogs is levied on the following articles when exported from PR.:—namely, sugar, all kinds, 22 cts; coffee, 54 cts; wood, all kinds 60 cts, honey, 5 cts; tobacco, 22 cts. Kilog. = 2'204 lbs.

P. = Portugal.

R. = Roumania.

Rus. = Russia.* After various Russian duties denotes that the articles so marked are subject to a duty of 10% on each rouble of duty leviable. † 20% ditto. ‡ 30% ditto. Pood 36 lbs, rouble 3/2.

Sal. = San Salvador. The present tariff is fixed at 80%, say 60% payable in cash and 20% in Government Bonds. A new tariff has, however, been passed, and when it comes into operation the maritime duties will be collected upon the gross weight of imported articles. During the first six months duties will then be charged at the rate of 110%, payable 80% in cash, and 30% in Government Bonds; afterwards the rate will be reduced to 100%: 70% in cash, and 30% in bonds.

Siam. The import and export duties are fixed at 3% a v; and are returned if the goods are re-exported. Arms and ammunition are imported only by special permit. Bullion and specie, wearing apparel and provisions, intended for personal use, are imported and exported free of duty.

S. = Spain. The conventional tariff only

Sn. = Sweden.

Sz. = Switzerland. Quintal 220'4 lbs, franc 9 1/2 d.

T. = Turkey.

USC. = United States of Colombia.

Ur. = Uruguay. Kilo 2'204 lbs, peso fuerte 4/2.

V. = Venezuela. All foreign merchant dize is divided into nine classes, on which duty is collected as follows:—1st class, free. 2nd class, 10 c. of a bolivar per kilo. = 3/7 1/2 English currency per 100 lb. 3rd class, 25 c. of a bolivar per kilo. = 9/1 English currency per 100 lb. 4th class, 75 c. of a bolivar per kilo. = £1 7s 3 1/2 English currency per 100 lb. 5th class, 1 bolivar and 25 c. per kilo. = £2 5s 5d English currency per 100 lb. 6th class, 2 bolivars and 50 c. per kilo. = £4 10 10d English currency per 100 lb. 7th class, 5 bolivars per kilo. = £9 1s 8d English currency per 100 lb. 8th class, 10 bolivars per kilo. = £18 3s 4d English currency per 100 lb. 9th class, 20 bolivars per kilo. = £36 6s 8d English currency per 100 lb.

Acetic Acid.—See Vinegar.

Acids.—**Gr.** Sulphuric (vitriol, hydrochloric, spirits of salts), nitric, phosnic, and all others $\frac{1}{2}$ d per $\frac{1}{4}$ lb; **Rus.** Acetic acid, salt of barium and strontium $\frac{1}{2}$ d per pound; **Sz.** Sulphocyanate of aluminium $\frac{1}{2}$ d per cwt, sulphurous acid compressed $\frac{1}{2}$ d per cwt, liquid ammonia in receptacles of wrought iron $\frac{1}{2}$ d per cwt, liquid carbonic acid $\frac{1}{2}$ d; **Nic.** Chlorhydric, muriatic, sulphonic, and nitric $\frac{1}{2}$ d per lb, carbonic, acetic, and oxalic $\frac{1}{2}$ d per lb, liquid ammonia $\frac{1}{2}$ d per lb.

Agricultural Implements and Machinery.—See Brass and Copper; also Iron and Steel.

Alc.—See Beer and Ale.

Alkali, per cwt.—**A.** Carbonate of soda, refined, or crystallised $\frac{1}{2}$ d, bicarbonate of soda $\frac{3}{4}$ d, caustic soda $\frac{1}{2}$ d, soda ash $\frac{1}{2}$ d; **B.** All kinds free; **Br.** Alkaloids or natural and artificial bases and their salts, not specially named, 100 per gramme; **D.** Caustic soda, crystals of soda, soda ash free; **F.** Caustic soda $\frac{1}{2}$ d, carbonate of soda refined, $\frac{1}{2}$ to 60 degrees or above $\frac{1}{2}$ d, crystals of soda $\frac{1}{2}$ d, bicarbonate of soda $\frac{1}{2}$ d; **G.** Caustic soda $\frac{1}{2}$ d, soda ash and bicarbonate of soda $\frac{1}{2}$ d; **Gr.** $\frac{1}{2}$ d; **H.** All kinds free; **I.** Soda, caustic, pure $\frac{1}{2}$ d, ditto impure $\frac{1}{2}$ d; **N.** Soda free; **PR.** Alkalies $\frac{1}{2}$ p 3 cts; **P.** Caustic alkalis free, crystals of soda $\frac{1}{2}$ d, soda ash and carbonate of soda $\frac{1}{2}$ d, bicarbonate of soda $\frac{1}{2}$ d; **R.** All kinds free; **Rus.** Crystals of soda $\frac{1}{2}$ d, soda ash $\frac{1}{2}$ d, caustic soda $\frac{1}{2}$ d, bicarbonate of soda $\frac{1}{2}$ d; **Sal.** Carbonate of soda and potash $\frac{1}{2}$ d per lb; **S.** Alkaline, carbonate and caustic alkalis $\frac{1}{2}$ d; **Sn.** Soda free; **Sz.** Caustic soda $\frac{1}{2}$ d, carbonate of soda, crystals of soda and soda ash $\frac{1}{2}$ d, bicarbonate of soda $\frac{1}{2}$ d, salicylate of soda $\frac{1}{2}$ d; **T.** All kinds $\frac{1}{2}$ d; **V.**

Alum, per cwt.—**A.** $\frac{1}{2}$ d; **B.** Free; **Br.** Dry, and others, 1000 per kilo, $\frac{1}{2}$ d; **Ch.** $\frac{1}{2}$ d per pecul; **Cor.** $\frac{1}{2}$ d; **D.** Free; **F.** $\frac{1}{2}$ d; **G.** $\frac{1}{2}$ d; **Gr.** Free; **H.** Free; **I.** $\frac{1}{2}$ d; **J.** 15 cents per 100 catties; **N.** Free; **Nic.** $\frac{1}{2}$ d per lb; **PR.** $\frac{1}{2}$ d per 100 kilos; **P.** $\frac{1}{2}$ d; **R.** Free; **Rus.** Crystalline of every kind $\frac{1}{2}$ d, calcined or in powder $\frac{1}{2}$ d; **Sal.** $\frac{1}{2}$ d per lb; **S.** $\frac{1}{2}$ d; **Sn.** Free; **Sz.** $\frac{1}{2}$ d; **T.** $\frac{1}{2}$ d; **V.** Crude, third class.

Anchors.—See Iron and Steel.

Anchor Chains.—See Iron and Steel.

Anchovies.—See Fish.

Angle Iron.—See Iron and Steel.

Arms and Ammunition.—See Iron and Steel.

Arsenic (White), per cwt.—**A.** $\frac{1}{2}$ d; **B.** Free; **Br.** 1050 per kilo, $\frac{1}{2}$ d; **Ch.** 4m 5 con per pecul; **D.** $\frac{1}{2}$ d; **F.** Free; **G.** Free; **Gr.** Free; **H.** Free; **I.** Free; **M.** Free; **N.** Free; **P.** Free; **R.** Free; **Rus.** $\frac{1}{2}$ d. (NOTE.—Arsenic is only allowed to be imported in double casks or cases.) **S.** $\frac{1}{2}$ d; **Sn.** May be imported by druggists only, and by manufacturers on special permission from the "Kommerskollegium" free; **Sz.** $\frac{1}{2}$ d; **T.** $\frac{1}{2}$ d; **V.** 5th class.

Axes.—See Iron and Steel.

Bacon and Hams, per cwt.—**A.** $\frac{1}{2}$ d; **B.** Free; **Br.** Bacon salted or in brine 120, hams prepared in any way 450; **D.** Free; **F.** $\frac{1}{2}$ d; **G.** $\frac{1}{2}$ d; **Gr.** Free; **Hay.** Salt hams $\frac{1}{2}$ d per lb; **H.** Salted $\frac{1}{2}$ d, smoked or dried $\frac{1}{2}$ d; **I.** $\frac{1}{2}$ d; **N.** Smoked $\frac{1}{2}$ d, other kinds free; **PR.** Bacon $\frac{1}{2}$ d per 100 kilos; **P.** $\frac{1}{2}$ d; **R.** $\frac{1}{2}$ d or $\frac{1}{2}$ d; **Rus.** $\frac{1}{2}$ d; **S.** $\frac{1}{2}$ d; **Sn.** Free; **Sz.** $\frac{1}{2}$ d; **T.** $\frac{1}{2}$ d; **USC.** Ham preserved 10d per kilog; **Ur.** Hams $\frac{1}{2}$ d; **V.** 3rd class hams, salt, pickled or smoked, 4th class hams in tins.

Bands for Machinery.—See Indianrubber and Gutta Percha; also Hides and Skins, and Woven Manufactures (Cotton).

Barges.—See Ships and Boats.

Barytes, per cwt.—**A.** Sulphate of baryta (artificial) $\frac{1}{2}$ d; **B.** Free; **Br.** 100 30% per kilo; **Cor.** Paints $\frac{1}{2}$ d; **D.** Not specified; **E.** Paints for domestic steamers free; **F.** $\frac{1}{2}$ d; **G.** $\frac{1}{2}$ d; **Gr.** Free; **Hi.** Paints $\frac{1}{2}$ d; **Hay.** Paints, all kinds $\frac{1}{2}$ d per lb; **H.** Free; **I.** Sulphate of baryta $\frac{1}{2}$ d, Carbonate of baryta $\frac{1}{2}$ d, nitrate of baryta $\frac{1}{2}$ d; **N.** free; **Nic.** Carbonate of lead $\frac{1}{2}$ d per lb; **Per.** Paints 45% a v; **P.** $\frac{1}{2}$ d; **R.** Free; **Rus.** Sulphate of baryta $\frac{1}{2}$ d, caustic baryta $\frac{1}{2}$ d; **Sal.** Paints, oil $\frac{1}{2}$ d, dry, g w. $\frac{1}{2}$ d per lb; **S.** Sulphate of baryta $\frac{1}{2}$ d; **Sn.**

Barytes—continued.

Colours prepared in oil 2½d per kilo; Sz. Sulphate of baryta 1½d, water of chloride of zinc 4½d, lead yellow 1½d; T. 8½ a v; Ven. 3rd class, common oil, blacklead, red lead, chromate of lead, lamp black, and clau, ochre, 5th class, paints not specified.

Bassinettes.—See Tin and Tinwares.**Batista.—See Woven Manufactures.****Bedsteads.—See Iron and Steel.**

Beef, Salted, per cwt.—A. 3½d; B. Free; C. 25½ a v; D. Free; F. 1/10; G. 10/8; Gr. Free; H. Salted 5/1, smoked or dried 6/9; I. 8/2; N. Smoked 11/4, other kinds free; Nie. Meats of all kinds 1½d per lb, hams preserved or seasoned, in boxes or not, 4d per lb; P. 31 r, per kilo; R. Salted 12 s, smoked 12 s or 8d; Rus. 7/11½; S. Salted or jerked 1½d; Sn. Free; Sz. 1/7½; T. 8½ a v; U.S.C. All kinds 1½d per kilo.

Beer and Ale.—

In ca
and c
other
1/2 p
kinds
Gr. .
1 8 p
2 4 p
gallon
100 b
sacch
being
kilos
in bot
per g
casks
cwt g
barre
casks
2/10
bottle
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in cas
class condensed ditto.

Bicycles.—See Carriages.**Biscuits.—See Confectionery.****Blankets.—See Woven Manufactures (Woollen and Worsted).**

Bleaching Materials.—A. Chloride of lime 1.6½ per cwt, chromate of potash 4½d, sulphite and hyposulphite of soda 4½d; B. Free; D. Chloride of lime and bleaching powder free; F. Chloride of lime 1.5 per cwt, bichromate of potash 4½d, sulphite of soda 10½d, hyposulphite of soda 1.12½; G. Chloride of lime 1.6½, chromate of potash, sulphite of soda free; Gr. Free; H. Free; I. Chloride of lime and of potash and hypochloride of soda free, sulphite of soda, 1.7½, chromate of potash 1.7½; N. Bleaching powder, &c. free; P. Chloride of lime free, chromate of potash 5½ a v, sulphite and hyposulphite of soda 5½ a v, R. Free; Rus. Chloride of lime and bleaching powder 4.4, chromate of potash 1.11 8d; S. Chloride of lime 6½d, chromate of potash 4½d, hyposulphite of soda 4½d; Sn. Chloride of lime free; Sz. Chloride of lime 1½d, chromate of potash 5d, sulphite and hyposulphite of soda 1½d; T. 8½ a v, paper used as blue for linen 6/8.

Blinds.—See Woven Manufactures.**Bloom Iron.—See Iron and Steel.****Boats.—See Ships.****Boilers.—See Brass and Copper; also Iron and Steel.****Bolts.—See Iron and Steel.****Books, Engravings, &c.—See Paper, &c.****Boots and Shoes.—See Hides and Skins, also Indiarubber and Gutta Percha.**

Borax, refined, per cwt.—A. 1/6½; B. Free; D. 4/8½; F. 4½d; G. Free; Gr. Free; H. Free; I. 2½d; N. Free; P. Free; R. Free; Rus. 1/1; S. 4½d; Sn. Free; Sz. 5d; T. 8½ a v.

Brandy.—See Spirits.

Brass and Copper—continued.

- coarse articles 7/4 $\frac{1}{2}$, ornamental articles not gilt or silvered £1 10s 5 $\frac{1}{2}$ d other 12/2 $\frac{1}{2}$, rods or wire, gilt or silvered, also gilt and silvered, wound in threads of textile materials £2 os 7 $\frac{1}{2}$ d, gilt and silvered, other £2 8s 8 $\frac{1}{2}$ d, cylinders and engraved plates for printing free, wire gauze, as the wire of which composed, with 15 lire per 100 kilogs, additional; J. Brass buttons 22 cents per gross, copper and brass in slabs, sheets, rods and nails 3 boos 50 cents per 100 catties, yellow metal, muntz metal, sheathing and nails 2'50; M. Copper and its alloys, manufactures of copper, brass, or bronze of all kinds, g w 0'30, ditto or of any common metal, gilt or plated g w 1'30, ditto nicked, not otherwise distinguished, g w 0'70, hollow wire and other articles of wire-drawn work of yellow metal, not gilt or plated, g w 1'20, copper in plates or sheets, g w 0'15, brass furniture of any kinds, with or without marble tops or mirrors, g w 0'20, copper wire insulated with any material for electric lighting, provided the diameter of the wire alone be up to No 6 Birmingham measurement, and that the interested persons prove its destination, free; N. I. other kinds 19/9; N. I. Copper, raw and refined, wrought or rolled, including plates and leaves for coppering bottoms of vessels, copper for coining, rods for cross beams, bolts, and nails, free, articles made of copper, whether lacquered or not, gilt or painted, bronze work and copper wire 10% a v; Nic. Per lb. Copper and bronze in plates 2 $\frac{1}{2}$ d, copper wire and tissues 4d, ornaments of copper of any kind 6 $\frac{1}{2}$ d, copper nails 4d, aviaries of copper, brass of any kind 4d, in sheets 1d; N. N. Copper, brass, and bronze, plates, sheets, bolts, clinch-rings and plates, sieve bottoms, bars, and unpolished tubes, tacks, nails, screws, rivets and nuts, wire, free, manufactures of copper or brass wire, plain or in combination with other materials not otherwise specified 19/9, plates, silvered or plated free, buttons, plain or combined with stone, glass, mother of pearl, porcelain, &c., including the weight of the wrapper, 19/9, cast busts or statues above 25 kilos (55 lbs) in weight free, other manufactures, gilt, silvered or plated £1 10s 6d; Per. Per. 2/2 to 5/1 per 100 kilogs, copper, ingots, bar, sheet 45% a v; PR. PR. Brass bars £2 1s 3d per 100 kilogs, sheet, nail, wire tubes £3 os 5d, all other £4 10s 1 $\frac{1}{2}$ d, copper, ore, ingots and bar £2 1s 3d, sheet £3 os 5d; P. per kilo, copper, pure or mixed with brass, bronze, &c., in unfinished basins, 35 r, ditto hammered or not otherwise mentioned, and tubing 10 r, ditto wire-drawn 80 r, ditto manufactured, not otherwise specified, plain, gilt, or silvered by any process 230 r, copper in plates and bars free; R. Copper, brass and bronze, unwrought in any form, broken articles of copper, bronze, and brass, copper filings, none of these gilt or silvered in sheets or wire, including cords for musical instruments, copper or brass wire for tissues and embroidery, not gilt or silvered free, articles of copper or brass wire, polished, tinned, painted or not, but not gilt or silvered, copper or brass wire gauze £1 8s 5d, braziers' wares of all sorts for kitchen and household use, vessels and apparatus for factories, boats, steam engines, &c., such as boilers, vats, reservoirs, apparatus for distillers, refiners, dyers, &c., common articles of copper, brass, or bronze simply cast or turned, common wares of sheet copper, brass, or bronze, all of these neither painted, polished, varnished, gilt, nor silvered £1 12s 6d, finely wrought, painted, polished or varnished articles of copper, brass or bronze, chased or otherwise ornamented, gilt, silvered or not, combined or not with other common materials (such as steel, wood, porcelain, crystal, &c.), but exclusive of mother of pearl, ivory, tortoise-shell and precious metals £4 1s 4d, objects of art, such as statues, statuettes, busts, bas-reliefs, candelabra, lustres, candlesticks, lamps, table and desk ornaments and artistic ornaments of bronze, gilt or not, combined or not with other materials, with the exception of ivory, mother of pearl, tortoise-shell, and precious metals £6 2s, nickel and alloys, nickel, unwrought, in lumps, hammered, beaten or drawn, not gilt or silvered free, packfong, unwrought, in lumps, hammered, beaten, or drawn, not gilt or silvered free, unenumerated articles of argentine or packfong, or other white alloys, neither gilt nor silvered £4 1s 4d. (NOTE.—When these articles are gilt or silvered an additional surtax of 50% above these duties will be levied.) Rus. Copper, brass, &c., red and yellow, also brass and other alloys, in pigs, blocks, shavings, filings and scrap £1 4s 8d, sheets, bars and rods £1 10s 7 $\frac{1}{2}$ d, wire, $\frac{1}{2}$ in. and less in thickness £1 10s 5d, manufactures of wire or of

Brass and Copper—continued.

- wire covered with cotton, silk or caoutchouc £2 14 2d, in sheets, polished £2 6s 10d, apparatus and parts of fittings of machines or machinery, composed wholly or principally of copper £1 14s 6d, cylinders, engraved or not, for cotton-printing mills, &c. £2 6s 10d, articles of brass or copper not otherwise enumerated, combined or not with wood, iron, tin, leather, or other similar materials £2 6s 10d articles of bronze and other alloys of copper, except brass, wholly or partly made up, weighing more than 1 funt each, lacquered or not £7 16s 2d, † articles of bronze, oxidised, gilt or silvered, weighing more than 1 funt each £13 0s 1d, † articles of bronze weighing less than 1 funt each £26 0s 2d †, rectifiers of brass and iron, in pieces 11/1 per pound; **Sal.** Brass and manufactures 1/2½ per lb., copper, sheets and bars g w 5½d, nails g w 1/2½, wares 1/2½; **S.** Copper of first fusion and old 4/9, copper and brass, bars and ingots and old brass 7/6½, plates and sheets, nails and copper wire 13/6, and tubes and large articles, partly wrought, as bottoms of "braseros" and boilers 18/9, brass wire 8/4, wire gauze, not further manufactured 16/9, bronze, unmanufactured 3/9½, wares of copper or of brass, bronze or other alloys, plain or lacquered £1 15s 3d, ditto, gilded, silvered or nicked £4 8s 1d, machinery of copper 9/9. **Sn.** Copper and brass, raw or refined free, nickel, copper and brass, wrought or cast, plates and other articles for further manufacture, bolts and nails for ships free, other copper manufactures, not polished 19/9, polished £1 19s 6d, wire, plain free, wire, gilt, silvered or plated £6 12s 8d, strings for instruments 13/7, mixed metals, wrought or cast sheet or nails for sheathing vessels, plates, wires, and articles for further manufacture free, other articles not gilt, silvered or plated 19/9, ditto, gilt, silvered or plated £1 19s 6d; **Sz.** Copper and brass and wares thereof, copper or brass, pure or with alloy, in ingots, blocks or plates, filings and old copper, &c. 4½d, ditto, hammered or rolled, in bars, sheets, tubes, or pipes 1/2½, copper wire 1/2½, articles composed of copper or brass wire 2/10, wire gauze 2/10½, rivets, vices, &c., wire covered with caoutchouc, metallic thread, or other substances 6/1, copper plates for printing 4½d, works in brass, nickel-plated wholly or in part 5/4, brass models for machine making 6/4, apparatus of copper for distillation 1/7; **T.** All kinds 8 ½ a v; **USC.** Copper and bronze, not in bars or ingots 5d per kilog, in sheets, any weight 5d, large pans, kettles, or articles of other kind, weight exceeding 25 kilog. 10d, other exceeding 500 grammes, but not 25 kilogs 1/8, others not exceeding 500 grammes 2/1, jewellery, beads, galloons, spangles, and the like, and electro-plated pieces, and cartridges for firearms 4/2; **Ur.** Brass sheets or bars, ingots and powder and manufactures 30½% on customs valuation, copper, sheets 30%, ingots and bars 20½%; **Ven.** 3rd class, unmanufactured, 4th, boilers, harness, buckles, chin straps, stoves, nails, padlocks, scales, steelyards, manufactured (not specified), and bridle bits, bells, hinges, stewpans, saucepans, tacks, spoons, spurs, trays, trumpets, wire, stirrups, 5th class, pencil and pen holders, 6th class, buttons, buckles, match boxes, pins, thimbles, 3rd class, scales, balances, steelyards, also copper, old, unmanufactured, ore and rivets. 5th class, sieves, 6th class, shoe, hat or clothing buckles.

Bricks.—See Earthenware and Porcelain.

Bridges.—See Iron and Steel.

Brimstone, per cwt.—**A.** Free; **B.** Free; **Ch.** and sulphur o. 2. o. a. per pecul (cannot be imported or exported except under special authority); **D.** Free; **F.** Free; **G.** Free; **Gr.** Free; **H.** Free; **I.** Free; **N.** Free; **P.** Crude or refined free; **R.** Free; **Rus.** Crude free, refined and flowers of sulphur 11½d per cwt*; **S.** 1½d; **Sn.** Free; **Sz.** Crude 1d, refined and flowers of sulphur 1½d; **T.** 8 ½ a v; **US.** Brimstone, crude free, brimstone in rolls or refined 2/1, sulphur, flowers of 4/2; **Ven.** 3rd class.

Bronze.—See Brass and copper.

Butter, per cwt.—**A.** 4/0½; **B.** Free; **Br.** 580 per kilo; **Ch.** Butter including condensed and desiccated milk free; **Cor.** 7½%; **D.** Free; **E.** ½d per lb; **F.** Fresh free, salted 9½d; **G.** 10/2; **Gr.** For the table, fresh or slightly salted £1 18s 5d, salt for cooking purposes 19/2; **H.** 1. Free; **Hay.** Per cwt 4/2; **H.** Free; **I.** Fresh 5/1½, salted 7/1½; **Nic.** per lb 2d; **N.** Free; **Per.** Per 100 kilo 1/3; **PR.** Per 100 kilo 38½; **P.** 185 r per kilo; **R.** Fresh or salted

Butter—continued.

£2 ea 8d; Rus. 4/11; Gal. g w. per lb 3d; G. £1 1s 4d; Br. Free;
 Sw. Fresh, milked, salt 3/3'016; T. 8½ a v; U.S. 12½; Ur. 31';
 Ven. 3rd class.

Buttons.—See Woven Manufactures.**Cables.—See Brass and Copper; also Iron and Steel.****Cakes.—See Confectionary.****Calf Skins.—See Hides and Skins.****Calicoes.—See Woven Manufactures.****Cambric.—See Woven Manufactures.**

Candles, per cwt.—A. Tallow 6 s, sperm, 11½, wax 10½;
 Ar. Candles, stearine, per kilo kinds 10½ a v;
 Br. Tallow 180 30%, stearine Tallow 25½ a v;
 other kinds 35% a v; On. Free; O. Tallow 7/1,
 other kinds 14 1; E. Per kilog, stearine 6 1½, wax,
 tallow 6/6, excise duty in addition, other than
 the wicks are woven, twisted or semically treated
 4/10½, excise duty in addition 12 candles 2/5½; G.
 All kinds 9 1½; Gr. Tallow 6/4½, wax 4/3 45; M. 1. Free; May. Per
 lb wax or spermaceti 2½d, tallow 1d; H. Tallow 2/6½, other kinds
 5½ a v; I. Candle waste 4/0'26, tallow free, stearine 6 1½, wax,
 yellow 8 1½, white 16/3; J. 2 boxes 25 cents per 100 candles; Nic.
 Per lb sperm, tallow, composition 3d, sperm oil, paraffine, and com-
 position and tallow 2½ per lb; N. All kinds 7/4; Per. Stearine
 and paraffine, tallow, sperm 70%; P. Candles of every description 80 r
 per kilo; R. Tallow, and articles made therefrom, and all primary
 materials for the manufacture of candles, stearine, and soap, as
 well as all products necessary for such manufactures free, tallow
 14/2, paraffine 4/10 3d, stearine and spermaceti 10 2, wax
 4/1 2d 4d; Rus. All kinds 10/31; Gal. Per lb 3d; S. Wax,
 paraffine, stearine and sperm 12/2, tallow 8d; Sw. Tallow or palmi-
 tine 3/11, other kinds 6/9; Sr. Tallow 1/7½, wax, sperm, stearine
 and paraffine 6/6; T. All kinds 8½ a v; Ur. Tallow, stearine,
 wax, or composition 0'14; Ven. 4th class tallow, 5th class sperm,
 paraffine, stearine, or composition.

Candy.—See Sugar.**Caps.—See Hats.****Cardboard.—See Paper, &c.****Carpets.—See Woven Manufactures, Woollen and Worsted.**

Carriages.—A. Carts and wagons 6/- each, carriages not covered with
 leather nor stuffed £2 10s, ditto covered or stuffed £7 10s,
 railway carriages for passengers, stuffed seats 9/2 per cwt, ditto
 not stuffed 6/7, for goods 5/1; Ar. Carriages, harness and ap-
 pendages 30% a v; B. 10% a v; Br. Bodies of cars, cabs and
 carriages each 160,000 r, cars, cabs, calèches, breughams, coaches,
 omnibuses, diligences &c. 60% a v, carriages, wagons &c., for
 railroads intended for the carriage of persons or goods and
 appendances 15% a v, carts, cars and wagons for carrying
 merchandise 60% a v, axletrees for carriages 250 r, forks,
 naves, rims, &c. of iron for carriages and harness 300 r,
 frames of carriages 32,000 r each, springs for cars, cabs,
 carriages, and other vehicles for conveying passengers and
 goods 300 r, spokes, naves, and other pieces of wood for
 wheels 80 r, wheels for carts, cars, and other conveyances:
 more than 80 centimetres in diameter 10,000 r per pair, above
 80 centimetres 5,000 r per pair, shafts and poles, common,
 unprepared, or simply sawn 2,000 r per pair, prepared, painted
 and finished 16,000 r per pair, any parts and articles, not
 otherwise distinguished, for carriages, cars, or carts 48% a v, hand-
 carts and wheelbarrows each from 1,600 r to 2,000 r;
 C. Cor. O. Carriages 35% a v; Cor. a v, Carriages 20%, horse cars 7½%,
 cars (railroad, steam) 7½%; D. For railways, with or without axle-
 trees or wheels, trollies 4/1 2d 3d each, for passengers, also tenders
 £16 13s 4d, other kinds £5 11s 1d, for roads, carriages partially or
 wholly covered including calèches with or without hoods £3 6s 8d,
 other kinds £1 6s 8d, other carriage-makers' work, also carts and
 wagons 7/1 per cwt; E. Per kilog 6d, horse cars, steam and railroad
 cars free; F. Carts for trade or agricultural purposes with
 springs 4 10½ per cwt, without springs 2 5½, carriages for railways

Carriages—continued.

- ordinary gauge, 1st class 6/6, ditto 2nd and 3rd classes 4 5/8, ditto vans for goods 3/8, narrow gauge passenger carriages 8/2, ditto vans for goods 4/0 1/2, contractors' trucks (trolleys) 2/0 1/2, tramway carriages, ordinary gauge 8/2, narrow gauge 10/2, carriages, other kinds, weighing 125 kilogrammes (2 1/2 cwt) or more £1 0s 4d, weighing less than 125 kilogrammes, including velocipedes £2 8s 9d; Q. Wooden wagon or coachmakers' works, coarse, unpolished or unpainted 1 6/8, polished, painted or varnished 5 1, carriages lined or stuffed £7 10s each, railway carriages not stuffed or lined 6% a v, ditto stuffed or lined 10%; Qr. Carriages with two wheels new or old covered or not £4 each, carriages with four wheels new or old covered or not £12, bath-chairs and velocipedes 8, carts, ordinary with two wheels 16, ditto with four wheels £1 12s, rail or tramway carriages and wagons for passengers 10% a v, for goods 10%; Hl. 10%, Hay. horse cars free, cars (railroad and steam) free; H. Carriages 41/8 each, cabs, gigs, &c. 20/10 each; H. 5% a v; l. Carts, 17/7 each, carriages: with not more than two wheels 33/7 each, with more than two wheels and not more than five springs 88/ each, railway wagons and carriages, goods trucks 4/0 1/2 per cwt, passengers' carriages, third class 5/10⁰ per cwt, second class 6/6, first class 7/8 1/2⁰ per cwt. (*Mixed carriages pay the duty on the highest class of which composed.) M. Sets of front wheels for carriages, with their axles, &c., g w o'60, single wheels g w o'60; N.l. Carriages and parts of carriages 6% a v; Nic. Per lb, carriages, carts, wheel barrows 3d, cars, railroad and steam, pay same duties, but any enterprising corporation will get permit to bring in free; N. Railway carriages for goods free, for passengers 3% a v, children's carriages, &c. 2 9/4 each, carts and wagons, all kinds free, carriages without brake or lining 8 11, carriages with brakes or lining (a) four-wheeled, covered wholly or in part, including caleches with fixed or movable hoods £4 8s 11d, (b) four-wheeled, other kinds £1 13s 4d, (c) two-wheeled 8 11; Per. Two and four-wheeled carriages 50%, horse cars and railway cars, special agreement; PR. Each passenger coach, railway and tramway 848 p, other articles for railways and tramways 174 p, coaches, landaus, omnibuses, and other 87 p, wagons, carts and hand carts per 100 kilo. 2 p 38 c; P. Carriages of all kinds, except railway carriages 27% a v, railway carriages 10% a v; R. Railway carriages for passengers, 1st and 2nd class, stuffed £26 each, 3rd class carriages, luggage wagons and cattle trucks £18, tramway carriages £8, other carriages, coupés, landaus and clarences with two or four seats, travelling carriages with or without receptacles for luggage, post diligences and omnibuses having eight seats or more, all such carriages upholstered, covered or not £18, light uncovered carriages such as cabriolets, cabs, dog-carts, &c., and omnibuses having less than eight seats, and common carriages hung on springs, covered, upholstered or not £8, detached parts of carriages included under the two preceding categories £1 16s 7d per cwt, vehicles not on springs, neither covered nor stuffed £3 each, detached pieces of carriages comprised in preceding article 12 1/2 per cwt, peasants' carriages of wood neither painted nor combined with iron except as regards the wheels 16/ each, bicycles, tricycles and hand-carts, with the exception of perambulators, also invalid chairs 16/ each; Rus. Large, on springs, as coaches, landaus, diligences and omnibuses £17 8s 4d† each, small, as caleches, dog-carts, phaetons, cabriolets, &c. £12 3s 10d,† carts and wagons on springs and carriages with only back springs £5 4s 6d,† carriages of all kinds without springs, also perambulators, &c. £1 14s 10d,† detached parts of carriages not otherwise specified £2 9s 3d per cwt, railway carriages, &c., coal trucks and trollies £13 1s 3d, axle goods wagons £19 3s 2d, carriages, 3rd class luggage and mail vans £30 9s 7d, carriages 1st and 2nd class (combination) £47 17s 11d, ditto 1st class £56 12s 1d, ditto 2nd class £39 3s 9d, tramcars for two horses £34 16s 8d each, for one horse £26 2s 6d; Sal. Each, carriages, two wheels £18 10s 2 1/2d, four wheels £30 17s 3 1/2d, cars, of any kind, 5% a v; S. Coaches and berlins new or old of four seats, caleches with two "tableros" with or without hoods £32 1s 5d each, berlins with two seats with or without a folding seat, omnibuses holding more than fifteen persons and diligences new or old £24 5s 5d, carriages of two or four wheels without "tableros" regardless of number of seats, omnibuses holding not more than fifteen persons and carriages not

Carriages—continued.

- otherwise specified £10 16s 8d, bodies of carriages plain unpainted 8½ per cwt, passenger carriages for railways and tramways 15/5, other railway carriages 4/5, carts and hand-carts 3/5½; **En.** Wagons and carts 5-7 each, carriages with two wheels, also sledges 16/8, ditto four wheels, gigs or dog-carts £1 7s 9d, ditto four wheels small with hoods £2 15s 6d, other kinds of carriages £5 11s 1d. **NOTE.**—In case of doubt as to the classification of an imported carriage it is charged 10% a v, but in no case more than £5 8s 4d, detached parts of carriages 10% a v; **Sz.** Carts and wagons 6% a v, carriages 10%, railway carriages for passengers 8%, for goods and luggage 8%, parts of carriages, wagons, &c., are chargeable according to the material of which made and the degree of manufacture; **T.** All kinds 8% a v; **USC.** Per kilo, railway cars and carriages free, cars and trucks for transport of goods and such uses 1½d, coaches and carriages of **Ur.** **Ven.** all kinds 2½d, velocipedes 1/8; **Ur.** 48% a v; **Ven.** 1st class, cars, railroad, steam, and horse, and class, carriages, caleches, omnibuses, phaetons, and others not specified, wagons, carts, wheel-barrow, wheels, coach, cart, carriage &c., 3rd class, hearse, with appurtenances, 4th class, children's perambulators and velocipedes.

Carriage Grease.—See Grease.

Carriage Springs.—See Iron and Steel.

Cartridges.—See Iron and Steel.

Carts.—See Carriages.

Cast Iron.—See Iron and Steel.

Caviar. See Fish.

Cement, per cwt.—**A.** 6d; **B.** Free; **Br.** 1005 10% per ko; **C.** 15% a v; **Cor.** 5% a v; **D.** Free; **E.** Per kil, 2½d; **F.** Free; **G.** Free; **Gr.** 1/3½; **H.** Free; **Hay.** Per hoghead 4/5, per barrel 1/0½; **M.** Free; **I.** 6d; **M.** Common lime and Roman cement free; **N.** Free; **Nic.** Free; **N.** Free; **Per.** 10%; **P.** Free; **R.** 3d; **Rus.** 8½d with an addition of 10% on each rouble of duty leviable; **Sal.** 1/6½ per quintal; **S.** 6d (per ton); **Sn.** Free; **Sz.** White lime and plaster, calcined, or ground 0/9½d, hydraulic lime, also Roman cement 1/9½d; portland, scoria, and pozzolane 3/8d; **T.** 8% a v; **Ven.** 1st class.

Chains.—See Iron and Steel.

Chairs.—See Household Furniture.

Chamois Leather.—See Hides and Skins.

Chandeliers.—See Glass and Glass Wares.

Checks.—See Woven Manufactures.

Cheese, per cwt.—**A.** 10% a v; **B.** Common free, other kinds 4/0½; **Br.** Of all or kilo; **C.** 35%; **Ch.** Free; **Cor.** 7½% a v; **D.** 11/9; **E.** 1log; **F.** Hard 1/7½, soft 1/2½; **G.** 10/2; **Gr.** 4/10½; **H.** 1/2½; **I.** 1/2½; **M.** All kinds 9/4 per cwt; **M.** 4/2½; **N.** 11/3½; **Per.** 70%; **PR.** 9cts per kilo; **P.** 190 r p; **R.** 1/6s 7d; **Rus.** £2 9s 3d with an addition of duty leviable; **Sal.** 5w 2½d per lb; **S.** 1/7½; **T.** 8% a v; **Ur.** 0/25; **Ven.** 4th class.

China.—See Earthenware.

Chloride of Lime.—See Bleaching Materials.

Chocolate.—See Cocoa.

Chromate of Potash.—See Bleaching Materials.

Cigars and Cigarettes.—See Tobacco, Cigars and Snuff.

Cinders.—See Coal.

Clocks and Watches.—**A.** Watches with cases of gold, or gilt a' each, ditto silver or silvered 1/, ditto other materials 7½d, cases for watches, of gold or gilt 1/4½, ditto of silver or silvered 5d, ditto of other materials, as materials of which made, works for watches 7½d per set, clocks, common wooden wall clocks and works thereof, also detached parts of clocks and watches £1 10s 6d per cwt, other not specified, and works thereof £2 10s 10d, tower clocks and parts thereof 10/2; **B.** Watches and works thereof free, clocks 10% a v, **Br.** works of clocks 5%; **Br.** Alarm clocks small, of white or yellow metal 1,600 r each, not otherwise mentioned 48% a v, chimney clocks 3,200 r, hands, spiral springs, chains, dial-plates, and other separate parts of works, for watches 10,000 r, for clocks and time-

Clocks and Watches—continued.

- pieces 2,000 r, watches of copper and its alloys, or of nickel 2,000 r each, of silver, plain or gilded 3,000 r each, of gold 6,000 r each, of any description, with precious stones 10% a v. Balance chronometers, for naval use 32,000 r each, not otherwise mentioned 48% a v. (NOTE.—Watches of silver, with ornaments of gold, or *vice versa*, and those of gold with ornaments of any other metal, will, as regards payment of duty, be considered as of gold; watches of silver, with ornaments or fittings of silver gilded will be considered as of silver gilded. Watches not finished, watch cases without works, and works without case, will pay duty as watches finished and complete, the works being included in the category of those watches paying the highest duty. The above duties include those on the small common boxes in which the watches and timepieces are imported.) Alarm clocks, small, white or yellow metal, each 1,600 r, other 48% a v; chimney clocks 3,200 r, watches, copper and alloys, or nickel, each 2,000 r, silver, plain or gilded, each 3,000 r, gold each 6,000 r, of any kind, with precious stones 10% a v; balance chronometers for naval use each 32,000 r, not otherwise mentioned 48% a v, keys, of copper and alloys, or iron and steel, for watches 4,800 r, for clocks and timepieces 500 r, clocks and timepieces, parts 2,000 r, watches, parts, 10,000 r, watch glasses 2,800 r; C. Clocks 35% a v, watches 15% a v; Ch. Clocks 5% a v, watches per pair 1'0'0'0 émaillés à perles per pair 4'5'0'6. Cor. a v, D. clocks 10%, watches, gold 20%, other 10%, watches, parts 20%; D. Watches and pocket chronometers, and complete works thereof 1'1½ each, table clocks all kinds, with or without shades or stands, and complete works thereof, also detached parts of table clocks, or watches 4d per lb, tower clock and works or detached parts thereof, as materials of which made, other kinds of clocks 2d lb; E. 1/0½ per kilo.; F. Watches with silver case 9½d each, ditto with gold cases 2, 9½, ditto with cases of common metal 4½d, watch movements, without cases, gilded, nickeled or finished 2/, ditto other kinds 2½d per lb, works of table or wall clocks 2½d, clocks, table or wall, wooden 6/1 per cwt, ditto other kinds 10/2, tower clocks 4/0½ each, cases of gold 11½d, ditto of silver or common metal 4½d, G. Clocks of all kinds 11d per lb, watches, in gold cases 3/ each, in silver or gilt cases 1/6, in cases of other metals 6d, works without cases 1/6, watch cases of gold 1/6, ditto of other metals 6d; Gr. Common clocks in wooden cases and works thereof, complete or detached £4 16s per cwt, other clocks, including mantel clocks and works thereof £4, watches of gold, or gold plated 4/ each, ditto of silver, or silver plated 1/7½, ditto of other materials 9½d, watch cases, gold, or gold plated 2/9½, silver, or silver plated 9½d, of other materials except platina 4½d, watch works, complete, without cases 1/2½ per cwt; Hl. If without glass front free, with glass front, also Hay. watches 10%; Hay. each clocks, musical, large 33/4, brass or bronze 25/, ordinary, common 8/4, wooden, with chain and weights 2/6, house church, &c., 20% a v; watches, gold 6/3, silver 3/1½, brass 2/1; H. I. H. Clocks and watches 5% a v; I. Watches in gold cases 9'6d each, in cases of any other metal 4/8 each, clocks, whether springs or pendulum, not in cases 4/- each, with the addition of the duty on the case, alarums not striking the hours 1'2'4d each, works, complete of watches 1'4d each, ditto of clocks whether spring or pendulum 1/7'2d each, ditto of turrets and church clocks, &c., 8/1½ per cwt, detached parts of clocks £2 os. 7½d per cwt; M. Tower clocks for public or private buildings free; Nl. Nic. 6% a v.; Nic. Clocks, all kinds 5d, watches, gold, silver, £1 14s. 0½d, watches, imitation gold, silver and nickel 17s. 0½d per lb.; N. Watches and pocket chronometers 1/1½ each, table clocks, in metal or porcelain case, not exceeding 8 kilos in weight 6d per lb, ditto exceeding 8 kilos in weight 8/11 each, in cases of other materials, not exceeding 5 kilos in weight 6d per lb, ditto exceeding 5 kilos in weight 5/7 each, tower clocks, as manufactured materials of which made, other clocks and dials for the same 4d per lb, watch and clock works, also works put together but without cases 6d. (NOTE.—Clock weights or other parts of tower clocks pay as manufactured materials of which made, wooden cases as wood wares, and other cases as clocks or watches.) Per. clocks 45% a v, watches 10%; PR. each, clocks with ordinary weights and alarums 46 cts, machinery of wall or table clocks with or without cases and chronometers

Clocks and Watches—continued.

- 1 p 61 cts, watches, gold 1 p 80 cts, silver and other metals 1 p 38 cts.; P. Gold watches 1,500 r each, watches of silver or any material other than gold 800 r, clocks or watches not otherwise mentioned, even if they have an alarum or chime, including accessories and ornaments, 25% a v; materials for watchmakers 300 r per kilo; R. Watches and pocket chronometers of gold, watches of any material adorned with gold, watches adorned with precious stones 12'6 each, watches of silver or other materials, not mounted or adorned with gold or precious stones 10d, clocks of bronze only, or of bronze and marble, or other materials except mother-of-pearl, ivory, tortoise-shell, precious metals, and fine or semi-fine stones 1'0½ per lb, clocks of various compositions imitating bronze, combined or not with wood (only polished or varnished, lacquered or painted), marble or alabaster, papier-mâché or carton pierre, but without mixture of other materials, 6½d, wall clocks mounted on wood, plain or carved, gilt, silvered, or not, but without incrustations, inlaid work, ivory, mother-of-pearl, tortoise-shell, or precious metals, table clocks, with or without mechanical movements, and alarum clocks, small, for the table 6½d, clock and watch works and appurtenances of all sorts, except watch glasses and parts of public clocks free; Rus. Watches and chronometers, gold or gilt 4'7½ each, other kinds 2'4½, clocks, tower £2 17s 6d, ditto wooden, with wooden or brass wheels 1'0½, watch and clock works, complete set 2'4½, ditto, detached parts thereof 4½d per lb. (NOTE.—Watch and clock cases pay according to the materials of which made.) Sal. Tower, £15 8s. 7½d each, metal 1s. 6½d. per inch, wooden 9½d. per inch, watches 10% a v.
- S. S. Watches of gold 6' each, of silver or other materials 1'1½, watch works, detached parts 1'1 per lb, clocks with weights, and alarum clocks 4½d each, complete works for wall and table clocks, with or without case, also chronometers 3'9. NOTE.—Unfinished works for wall or table clocks are charged 5½d per lb, and cases according to materials of which made. Sn. Watches with gold cases, and ships' chronometers 1'1½ each, watches with cases not of gold 6½d, table or wall clocks of bronze, alabaster, or porcelain, or other like material 4½d per lb, ditto of wood, &c., watch and clock works not otherwise enumerated, and detached pieces thereof 6d each, cases or weights, also tower clocks or parts thereof, as materials of which made; Sz. Common clocks with wooden cases, painted or not, but not gilt ½d per lb, other kinds 1½d, watches of all kinds 1½d, detached pieces of works of clocks or watches ½d, cases for watches of all kinds ½d; T. All kinds 8% a v; Ven. 6th class clocks (all kinds) chronometers, hour glasses, 8th class watches and cases, 6th class watch or clock keys, gold or silver, 3rd class ditto, not specified, 6th class regulators, springs, hands and other interior machinery for watches and clocks.

Clothing (ready-made).—See Woven Manufactures.

Coal, Cinders and Patent Fuel.—A. Free; Ar. Free; B. Free; Br. Coal and coke free; C. Free; Ch. Per ton 0'0'5'0 and Charcoal free; Cor. Coal and coke 5 % a v.; D. 1'4 per ton; F. Coal and coke 11½d, cinders 1'1-6d; G. Free; Gr. Coals free; Hl. free; Hay. 10d per barrel, 4 2 per hogshead; H. Free; I. Free; Nl. Free; Nic. free; N. Free; Per 10%; P. 1'6; R. Coal and coke free; Rus. Imported at Baltic ports 1'11, ditto Black Sea and Azov ports 5'11 and 40%, ditto along the land frontier 3'11½; Sal. 5% a v; S. 1'; Sn. Free; Sz. 2d; T. 8% a v; Ur. Coal 6% a v; Ven. First class.

Cocoa (prepared) and Chocolate, per cwt.—A. Cocoa ground, paste and chocolate £2 10s 10d; Ar. Chocolate 50% a v; B. 18 3; Br. 600 and 30% per kilo, coca butter chocolate '600 and 30%; C. Chocolate 35% a v; D. Cocoa powder, paste and chocolate 16'6; F. Chocolate £1 17s 9d, cocoa ground £2 14s 10d; G. Cocoa prepared and chocolate £2 0s 8d; Gr. Cocoa free, ditto ground paste and chocolate £4 16s; H. Chocolate prepared with sugar £1 1s 2d, all other kinds free; I. Cocoa 57/8½, cocoa in the berry 40/7'68, crushed, ground or in paste 50'9'6; Nic. In beans or ground 5d per lb; N. Cocoa in powder, cakes or lumps, and chocolate £1 2s 7d, cocoa beans and pods ½d per kilo; P.R. Per kilo, 32 cts; P. Per kilo, cocoa and husks of the same 30 r, chocolate 130 r; R. Cocoa ground or in tablets £1 4s 5d, cocoa paste £1 8s 5d; chocolate £1 4s 5d; Rus. Cocoa ground without

Cocoa—continued.

sugar £2 14s 2d, chocolate £3 18s 10d, with an addition of 20% on each rouble of duty leviable; B. Cocoa, caracas and the like £1 7s 2d, Guayaquil and the like 19/9½, *transitory duty in addition to the above* 6/6, chocolate £1 6s 5d; Sn. Cocoa 16/11, chocolate £1 8s 3d; Sz. Cocoa 7½d, ditto in powder and chocolate 6/6; T. 8% a v; Ur. Chocolate 44% a v, in paste 0.30 per kilo.

Coffee.—A. Raw £2 0s 8d per cwt, imported by sea £1 17s 7½, roasted £2 10s 10d; Ar. Per kilo 8c; B. 4/0½, roasted 5/3½; D. Raw 14/1½, roasted and coffee substitutes 16/5½; F. Husks and berries £3 3s 5d, roasted or ground £4 4s 6½d; G. Raw £1 0s 4d, roasted or ground £1 5s 5d; Gr. Raw or roasted £1 5s 7½d; H. Free; I. Raw £2 16s 11d, roasted £4 1s 3½d, chicory 3/3; N. 33¼ per kilo; Nic. In beans or ground 2½d; P. Husks and berries from Portuguese possessions 18/3½, husks and berries from all other places £1 14s 3½d, roasted or ground and chicory £2 14s 10½d; Rus. Coffee and chicory £1 9s 7d; S. All kinds, conventional tariff 17/10½, general tariff £1 0s 4d, ditto transitory duty 10/11½; Sn. Raw 14/8, roasted and chicory 19/9; Sz. Raw 1.5, roasted 1/10, chicory 3/3; T. 8% a v.

Coke.—See Coal, Cinders, and Patent Fuel.

Combs.—See Indiarubber and Gutta Percha.

Confectionery, per cwt.—A. £2 9s 8d; Ar. Biscuits of all kinds 9 cts per kilo, preserved fruits 45% a v; B. Sweetmeats (see Sugar, Refined), other kinds 10/2; Br. 500 per kilo and 30%, jams 100 per kilo and 30%, crystallised jams 850; C. Confectionery, conserves in sugar, sugar of all kinds 35% a v; Ch. Almonds 0.4.5.0 per pecul, biscuits all kinds free, preserves, comfits and sweetmeats, 100 catties 0.5.0.0; D. 16/6; F. Without sugar or honey 3/3, preserved with sugar or honey and marmalade 11/, sweetmeats £1 3s 7d; G. £1 10s 6d; Gr. £4 16s; H. £1 1s 2d; I. Plain biscuits 16/3, confectionery and preserves with sugar or honey £1 16s 2d, bread and ships' biscuits 3/7½; M. Sweets of all kinds l.w. 1.00; Ni. Fruits not specially classified 5% a v; Nic. Per lb. Confectionery and all kinds of sweets 5d, preserved olives and capers 1d, syrup and jelly of any kind 5d, confections, bonbons, preserved fruits, pastilles, in wrappers and packets 5d, sweetmeats, residues of brown sugar, in loaves or cakes 1d, fruit essences for syrups 2.1, macaroni and other farinaceous pastes such as sea biscuits &c. 1½d, dried fruits not preserved 3d, fruits of all kinds in sugar, honey or rossolis 4d; N. Cakes, biscuits, and preserves £1 2s 7d, other kinds £1 6s 4d, apricot kernels 9½d per kilo; P. In syrup 17/5, dry £1 11s 2d; R. Bon-bons, syrups, &c. £4 1s 3d, fruit preserved in sugar, or honey preserves, marmalade, &c., £2 12s 10d; Rus. Cakes and biscuits, g w £1 14s 6d, other kinds £3 18s 10d*; S. £1 14s 6d; Sn. £1 6s 6d; Sz. Cakes 2.2.82, biscuits and fancy pastry without sugar 6/1.15, articles prepared with kola, with label £1 19s 7d, kola in powder, boxes &c. without label 6/4, galettes, biscuits, and pastilles of kola 19/9½; T. 8% a v; Ur. Biscuits all kinds, and sweetmeats 44% a v.

Cooked Beef.—See Beef, Salted.

Copper and Brass.—See Brass and Copper.

Copper Sheets.—See Brass and Copper.

Copper Wares.—See Brass and Copper.

Copperas, per cwt.—A. Sulphate of iron (green copperas) 2½d, other kinds 1/6½; B. All kinds free; Ch. 1 mace per pecul; D. All kinds free; F. Sulphate of copper 1.2½, sulphate of iron 3½d, sulphate of quinine £5 2s 6d; G. All kinds free; Gr. Free; H. All kinds free; I. All kinds 9½d; N. All kinds free; Nic. Green copperas or sulphate of iron ½d per lb; P. All kinds 7½d; R. Free; Rus. Green copperas 2/2, other kinds 4/11 with an addition of 20% on each rouble of duty leviable; Sal. 1½d per lb; S. Sulphate of iron (green copperas) 7½d, other kinds 4/0½, sulphate of copper free; Sn. All kind free Sz. All kinds 1½d; T. 8% a v.

Cordage and Twine, per cwt.—A. Ropes, cables, cords, also bleached, tarred 5fl per 100 kilos, all other ropemaker's wares 18fl. (NOTE.—Cocoa and similar fibres twisted into ropes for the manufacture of mats, &c., when fulfilling all conditions imposed by Government on receiving a permit, free.) B. Cordage free; Br. Of cotton, in pieces, 120 per kilo and 30%, manufactured 150 per kilo and 30%, of linen 250 per kilo and 30%. C. Old free; Ch. Manilla 100 catties 0.3.5.0; D. 2.4½.

Fish—continued.

- 8n. salted 2/0½, sardines salted 9½d, shell-fish 4½d; sardines, anchovies, in oil 2½d per kilo; 8n. Fish fresh free, salted or preserved anchovies and sardines, tunny fish 11/4, salted or preserved other kinds free;
 8z. 8z. Fresh 1/0½, salted, smoked, dried or prepared in any other manner, in cases of 5 kilos or more in weight 9½d, ditto in cases or packages of less than 5 kilos in weight 6/6, oysters, lobsters, mussels, &c., fresh 12/2; T. All kinds 8% a v; UR. Fish in brine per case or barrel 0/10 per kilo, dried 0/05; USC. In pickle, Ven. other, per kilo, 2½d; Ven. 3rd class fish, salt or smoked, sardines.

Flannel.—See Woven Manufactures.

Floor Cloth.—See Indiarubber and Gutta Percha, also Woven Manufactures.

Foulards.—See Woven Manufactures.

Fringes.—See Woven Manufactures.

Furnaces.—See Iron and Steel.

Furniture.—See Household Furniture.

Fustians.—See Woven Manufactures.

Galloons.—See Woven Manufactures.

Galvanised Iron.—See Iron and Steel.

Garden Seats.—See Iron and Steel.

Gauzes.—See Woven Manufactures.

Gin.—See Spirits.

Girths.—See Woven Manufactures.

- Glass and Glass Wares, per cwt.—A.—Hollow wares of natural-coloured glass, but not white, not pressed, not polished, figured or ground 2/0½, mirror glass, rough and unpolished, also glass in rough masses, cast sheets, rough and ribbed, tubes, rods and plates without distinction of colour, for blowing or making beads or buttons, glaze and enamel in masses, optical glass, not cut in lenses, rough, unfinished 1/6½, white hollow glass, transparent, not figured, pressed, ground, or polished, and hollow glass of natural colour, or white with ground stoppers, bottoms, or rims 4/0½, pendants, buttons, coral, pearls, beads, &c., coloured or not 2/0½, window glass in natural tints (green or half or wholly white), not polished or figured 4/0½, white hollow glass, transparent, pressed, polished, ground, cut, figured, or engraved, also heavy white glass not specially enumerated 8/2, glass, coloured, not otherwise specified, painted, gilt, or silvered, false jewellery, not set, all polished, silvered, or figured plate-glass and mirrors framed 12/2, glass and enamel wares not otherwise specified, combined or not with other materials, provided they do not come under the head of small ornamental wares, 12/2, optical and watch glasses finished and polished, £2 10s 10d; B. Common bottles, &c., 4½d, other kinds 10% a v, broken glass free; Br. Children's toys 1,000 to 3,200 r, mirrors, with frames, small, from 450 r to 3,200 r, other, not distinguished 48% a v, bottles, glasses, and graduated measures for use in pharmacy 550 r; C. Looking-glasses 25% and 35% a v, bottles, jars of all kinds 15% a v; Ch. Glass and crystal ware free, glass, window, per box 100 sq. feet 0/13/0, glass armlets, beads, and vitrified ware 100 catties 0/5/0; Cor. Cor. Window 7½%, plate and manufactures 10%, beads 30% a v; D. D. Glass, unpolished, in sheets or panes, window glass, patent or skylight glass, common green or brown hollow ware, as bottles, milk-pans, or retorts, and rough, unpolished plate-glass 3/6½, polished plate-glass, unsilvered, in sheets measuring up to 800 Danish square inches 18/10, ditto from 800 to 1,800 Danish square inches £1 8s 3d, ditto 1,800 Danish square inches and above £1 17s 8d, silvered plate-glass, polished or not (including weight of frames) 25% above the duty on unsilvered, glass wares, combined with metal, also polished glass-flux drops, beads, &c. £1 17s 8d, other kinds 16/6; E. Glass 6d, bottles 1d, all other manufactures 6d, eyeglasses of all descriptions 4s per kilo; F. Bottles, full or empty, all kinds 1 2½, window glass 1/5, ditto coloured, polished or engraved 6/1, watch and optical glasses, rough 6/1, ditto cut or polished £3 0s 7d, table glass, white or of one colour, plain or moulded 1/5, ditto cut or engraved 4/0½, ditto decorated with gold or colour 10/2, plate-glass of less than ½ square metre, polished, silvered or not 8/2, ditto of ½ square metre or more, unpolished 8d per square yard, ditto of ½ square metre or more, polished or silvered 2/ per square yard, vitrification and enamel, in masses or tubes 1/6½ per cwt ditto in beads, cut and pierced imitation jewels, &c. 4/10½, spun glass and imitation coral 4/10½, broken glass or cullet free,

Glass and Glass Wares—continued.

- johns 2/5, broken glass free, glass, crystal and enamel, in form of pearls, cut as gems, or in pendants for chandeliers and other similar wares 12/2½, vitrifications and enamel in cakes, sticks, or powder 2'0½ ;
- J.** **Ni.** J. 53 cents per box of 100 sq feet ; **Ni.** Glass and glass work of all descriptions 10% a v ; **Nic.** In sheets, bottles, drinking glasses, and lamp tubes 2d per lb., candelabra, lustres, flower vases, and the like 4d, physical, surgical, and chemical free, looking glasses, all kinds 5d, eye-glasses, spectacles, &c 6½, ditto mounted in gold or silver 3'1½ ; **N.** Common bottles or flasks not cut or ground free, plate or sheet glass silvered, including mirrors 13/, not silvered, but cut and painted, gilt, varnished, engraved, polished or figured 7/4, other kinds 3'4½, patent and skylight glass free, milk-pans, pickle-jars, retorts, and telegraph insulators free, optical and burning glasses, unset enamel ditto free, other glass wares, including flasks covered with wicker work 15/3 ; **Per.** Glass 45%, manufactures 45% a v ;
- PR.** **PR.** Glassware, hollow, common, or ordinary 4 peso 60 c per 100 kilos, crystal, hollow, and glass imitation 8 peso 05 c, window and plate glass 3 peso 91 c, glass and crystal, quicksilvered, and crystals for spectacles and watches 18 peso 40 ; **P.** Glass vessels, common, of any colour 20 r per kilo, glass and crystal in polished sheets, with or without frames 27% a v, glass and crystal, manufactured, not otherwise classified 110 r per kilo ; **R.** Enamel, glass mass, glass in rods, stems, or unshapen pieces, and in the rough 4'1, window glass or glass in sheets, green, half white, or entirely white 2'0½, common, i.e., sheet glass of natural colours, green, white or half white, ground or not, engraved, ornamented, cut or painted, coloured, engraved, ornamented, cut, painted or not £1 0s 5d, mirror glass not exceeding thirty centimetres in either breadth or length 16½, mirror glass exceeding either in breadth or length thirty centimetres £1 12s 6d, table glass of natural colour, black, yellow, half white or entirely white, neither ground, moulded, engraved, ornamented, cut, painted, gilt, nor silvered, nor combined with other materials 6/1, glass moulded, ground, engraved, figured, but not coloured or cut 8/2, various articles (except those enumerated under the heading of fancy articles, &c.) of glass of any colour, but neither ground, engraved, moulded, ornamented, cut, painted, gilt, silvered, nor combined with other materials, such as tubes, cylinders, globes and shades for lamps, drops, imitation pearls, bracelets, rings, buttons, &c. 16½, articles of coloured glass, such as imitation pearls, corals or jet 15 5, glass moulded, ground, engraved, figured, but not coloured or cut 8 2, glass, cut, coloured, painted, gilt or silvered, and pendants for lustres £1 0s 4d, fancy articles of all kinds of glass, such as statuettes, inkstands, toilet articles, candlesticks, lamps, and similar articles, combined or not with other materials, except precious metals
- Rus.** £4 1s 6d ; **Rus.** Manufactures of green bottle-glass, plain, with moulded patterns or letters, but not cut or ground 5/5.* **NOTE.**—Wine bottles are admitted duty free at the ports of the Black Sea and Sea of Azov, and at the custom-houses of the Bessarabian frontier. Window glass of all kinds, green, half white or white 11/10,* ditto coloured (dyed in the paste), milk white, dull or reticulated £1 1s 8d,* articles of white or half white glass, plain or with patterns, not cut nor ground, but with or without ground bottoms, stoppers, &c. 11/10,† articles of coloured or double glass, of glass milk white, dull or reticulated, plain not ground or cut, and with or without ground stoppers, &c £1 1s 8d,* cut and polished, or painted, gilt or silvered, with cut or engraved patterns, or with bronze or other ornaments £4 6s 8d,* of white glass or crystal cut or ground, but without ornaments £2 3s 4d,* mirrors or silvered plate glass for mirrors having a superficies of 100 square vershoks or less £1 3s 8d† :—
- | From 101 to | 200 square vershoks | | 1'1½ square foot‡ |
|-------------|---------------------|-------|-------------------|
| 201 | 300 | ..... | 1'5½ |
| 301 | 400 | ..... | 2'2½ |
| 401 | 500 | ..... | 2'11½ |
| 501 | 600 | ..... | 3'4½ |
| 601 | 800 | ..... | 3'8½ |
| 801 | 1,000 | ..... | 4'1 |
| 1,001 | 1,200 | ..... | 4'5½ |
| 1,201 | 1,400 | ..... | 4'10 |
| 1,401 | 1,600 | ..... | 5'2½ |
- with an addition of ¼ cop per square vershok (4½d per square foot)

Gold and Silver Wares—continued.

- P. except gilt or plated $\frac{1}{2}$ per kilo; gilt, plated, or metal $\frac{1}{2}$; P. Gold leaf 7 dtd, silver leaf 3 yrd, gold and silver wire 1 dtd, gold and silverware wares, all kinds and imitation jewellery 1 dtd, plated wares 2nd, except duty in addition, on silverware wares 5 yrd, on goldware wares 9.
- Q. Wares of gold or silver plain or in combination with other materials, also gold and silver leaf 1 dtd.
- Gr. Gold wares of all kinds 1 $\frac{1}{2}$, silver wares not gilt or enamelled 7 dtd, duty gilt or enamelled 11 dtd.
- III. H. Jewellery 10 $\frac{1}{2}$.
- H. Gold and silver leaf and wire 1 $\frac{1}{2}$ & 7, gold and silverware wares 1 $\frac{1}{2}$.
- I. Gold in ingots, dust and sweep from, rolled, in sheets and spangles, and drawn to leaves, including the weight silver in ingots, dust and sweep and drawn to wire 1 $\frac{1}{2}$, wound weight of the books 1 $\frac{1}{2}$ in case goldsmiths work and gold gilt silverware wares 1 yrd, jewellery gilt 1 $\frac{1}{2}$.
- III. Gold and silver, ingots or pieces, coin silver work, gullion trim.
- III. H. Per lb, Jewels of any kind, imitation gold and silver 10, fancy articles of gold 10 in lb, duty of gold or silver with precious stones 10 in lb, silver of any kind 10, watches of gold 10 in lb, silver 10, cloth of gold 10 in lb, duty of silver 10, pearls real not mounted 10 in lb, diamonds polished or not 10 in lb.
- H. Gold and silver leaf from, wire-drawers' work, of gold or silver also wire spangles, cords, &c., real or imitation 1 yrd.
- Per. Jewellery, duty 10 & 7 imitation 10 & 7.
- PR. Gold jewellery with pearls or stones 9 pms per hectogramme silver dn. do. 1 pms 35 cts, gold and silver to other articles 10 cts.
- P. Gold in bars and in specie, silver in bars and in specie from, gold in leaf for gilding (including the books) 3, one real per kilo, gold not otherwise distinguished, in wire or manufactured 10, one real, silver in leaf for silvering (including the books) 1, one real, silver or platinum not otherwise mentioned, or in wire 10, one real, silver and platinum manufactured 10, one real.
- H. Gold in bars and ingots, broken articles of gold and gold dust, gold leaf for gilding from, gold hammered and wire 10 yrd, goldsmiths wares of gold platinum or silver gilt 1 $\frac{1}{2}$, jewellery of gold or platinum with or without precious stones 1 $\frac{1}{2}$, silver unwrought in pieces, broken articles of silver, silver leaf from silver hammered and wire 1 $\frac{1}{2}$, silverware wares 1 $\frac{1}{2}$, jewellery of silver with or without precious stones 10.
- III. Articles of gold of all kinds, gold jewellery &c. not otherwise enumerated 10, articles of silver or of silver gilt of all kinds, silver jewellery, &c. not otherwise enumerated 10, gold and silver lace, silver drawn and spun, spangles, and other ornaments, and gold and silver ribbon 10, gold and silver leaf single or double, including the weight of the books 3 dtd.
- G. Gold jewellery, or gems set in gold, of whatever kind 6 & 10, silver jewellery or gems set in silver of whatever kind 10 & 10 all other gold or silver wares 7 yrd.
- Gr. Gold wares 1 dtd, gold leaf, real or false (including the weight of book or wrapper), also gold dust 1 yrd, gold and silver wire lace fringes, bands, &c., 1 yrd, silver wares, gilt or not 2 yrd, silver leaf real or not, 1 yrd.
- Gr. Gold and silver leaf 1 yrd, gold and silver rolled, in pieces or bands, and wire 1 yrd, jewellery and gold and silverware work, real or plated 1 yrd.
- Y. All kinds of gold and silver wares 10 & 7.
- UCC. UCC. In bars 1 $\frac{1}{2}$ per kilo, other form 1, coins not inferior to Van.
- Van. standard one, fine, fine; Van. 10th class, imitation jewellery, 10th class, gold and silver, precious stones, watch, jewellery, and card cases.

Gold Leaf - See Gold and Silver Wares.

- GREENS, per cwt - A. 10 $\frac{1}{2}$ B. Free Gr. Tallow, raw or rendered 10 per lb, in cask and purified for candles 10 per lb, Gl. Animal tallow, & 1000 lbs casting vegetable 10, 1000 lbs varnish or crude liquors 10, 1000 lbs Varish 10 & 7.
- Q. Refined of oil or iron oil, also carriage grease 10, tallow 10.
- P. Grease of fish 10, duty other kinds free.
- Q. Animal fat (other than lard) 10, carriage grease 10, Gr. 10.
- May tallow 10.
- H. Free (Note - Cart grease is butter, pork, and tallow, &c., of one libragramme pays a duty of 10 & 7.
- L. Varnish made with spirits, 10, with addition of 10 lbs per hectol of alcohol contained in

Grease—continued.

basis of 70° of strength, all other kinds 3/2; Nic. Tallow and all animal fats 1d per lb; N. Fat, train oil, spent fish oil free, varnishes, drying oils and polish £1 11s, wagon grease 2/3½; PR. Varnishes 7 peso 54 cts per 100 kilo, grease 5 peso 80 cts per 100 kilo; P. Free; R. Grease of fish 4/1, tallow and all grease employed for industrial purposes free; Rus. 2/11½†; S. 4½d; Sn. Machine and carriage grease 1/1½, tallow free, spirit 1/3½ per kilo, other 3½d per kilo, spirit varnishes imported in receptacles containing more than 20 kilos 5d per kilo; Sz. Tallow 2½d, carriage grease 9½d, varnish and lac of all kinds, also oil varnish 2/10, and all fats serving for food not distinguished 2/9½; T. 8% a v. (NOTE.—Grease for soap stocks free); USC. 10d per kilo, tallow ½d.

Grindstones.—A. Free; B. Free; D. Up to 14 inches diameter ½d each, From 14 inches to 20 inches wide, 1d

„ 20 „ 32 „ 2½d
„ 32 „ 41 „ 4½d

of 42 inches diameter and above 4½d per cubic foot; F. Free; G. 1½d per cwt; Gr. Free; H. Grindstones small 5%, ditto other kinds and millstones free; I. Free; N. Free; P. 3d per cwt; R. Rough stones for millstones 1d, millstones, French, of all sizes £1 18s 5d each, ditto of Carpathian quartz £1 8s 10d, ditto common of trachite and others 14/5, grindstones 1/3½ per cwt, millstones of all kinds 12½ per pair; Rus. 3½d per cwt.; S. 6d per ton; Sn. Free Sz. Millstones 4½d per cwt, grindstones unmounted 1½d, ditto mounted 1/7½; T. 8% a v.

Gunpowder.—See Iron and Steel.

Haberdashery.—See Woven Manufactures.

Hammers.—See Iron and Steel.

Hams.—See Bacon and Hams.

Handkerchiefs.—See Woven Manufactures.

Hardware.—See Iron and Steel.

Harness.—See Hides and Skins.

Hats, Beavers, Silk, &c., per cwt.—A. Of felt £4 11s 5d, of silk £6 12s 1d; Ar. Of all sorts 40% a v; B. 10% a v; Br. Of hare, otter, or beaver skin and hair, plain 2'200 each, ditto ornamented 4'500 each, of esparto, with ornaments '600 each, without ornaments 1'200 each, of Chilian, Peruvian, or Manilla straw 2'400, of Italian and similar straws, without ornament 1'000, of rice, oat, palm, and similar straws, without ornaments '700, of all other kinds, without ornaments 48% a v, hats of straw 1'500 each and 30% (Chili, Peru), ditto Italian '600 and 30%; C. Hats, excepting commons, 35% a v; Ch. Felt caps 1'2'5'0 per 100, silk caps 0'9'0'0 per 100; D. Silk 11d each, other kinds £7 10s 7d per cwt; E. 2/1 per kilo, trimmed for ladies 4/2; F. Felt 2½d each, silk 11½d; G. Of silk or half-silk £7 12s 5d per cwt, of felt £4 11s 5d; Gr. High, for men 2/4½ each, low, of felt 11½d; Hay. Of bear-skin, for sappers 2/1 each, cocked, with silver or gold lace 33/4 each, other from 2/6 to 37/6 per doz; H. 5% a v; I. Caps £4 per 100, men's hats, of felt, hair, or wool, trimmed or not £2, ladies' hats, trimmed £20, of silk, pure or mixed with other material £6, of straw (hats of esparto, bark, or palm fibre are considered as of straw) £1; N. Of felt or silk 5½d each; PR. All kinds 1 peso 86 cts per doz under foreign flag, and 1 peso 30 cts under Spanish flag; P. 25'75 a v; R. Silk hats for men, opera hats of all kinds £52, straw hats £26, felt hats, fine or semi-fine £12 4s, ditto coarse for peasants and soldiers 8/2; Rus. 3/2 each, men's caps 1/3½, with an addition of 20% on each rouble of duty leviable in each case; S. 1/5½; Sn. Of silk 1/8, other kinds 5½d; Sz. Women's hats, all kinds, trimmed 12/2½, men's hats, all kinds, trimmed £3 1s; T. All kinds 8% a v; USC. As materials of which composed, straw 5s per kilo; Ur. 48% a v.

Hemp.—See Linen.

Herrings.—See Fish.

Hides, Skins and Leather, per cwt.—A. Hides and skins, raw free, sheep or goat skins tanned (not tawed or chamois), also split not dyed 6/1, leather, common, not otherwise specified, cow and horse hide, merely blacked, stretched or grained, in whole or half skins 9/2, fine black

Hides, Skins, and Leather—continued.

- not tanned 3d, skins tanned or curried with the hair 3/3, leather 3/3, hides and skins sewn together, but not fitted, such as bags or racks, for lining mantles 12/2½, skins of animals with the head stuffed, simply pared round the edges, neither cut nor adjusted 3/2; T. Leather and leather wares of all kinds 8% a v, harness, shoes of all kinds 48% a v, soles and hides curried 44%; USC. Not prepared except those enamelled rod, per kilo enamelled leather not manufactured 1/3, boots and shoes, &c., 4/2, gloves, caps, skins for adorning dresses, &c., pocket books, cigar cases, satchels, and other similar articles 5/-, wares not otherwise mentioned 4/2; Ven. 4th class untanned and sole leather, 5th class, parchment and imitations, 6th class, tanned and manufactured patent leather, and tanned sheep skins. Leather manufactures: 2nd class, harness for coaches and vehicles, not specified, 3rd class, for hearses, carts, wagons, holsters, 5th class, bags, hat boxes, strings, trunks, measures, 6th class, whips, portemonnaies, 7th class, girths, headstalls, reins, saddles, shot pouches, scabbards, patent leather manufactures, 8th class, gloves, 9th class, boots and shoes.

Hinges.—See Iron and Steel.

Hollow Ware.—See Iron and Steel.

Hooks.—See Iron and Steel.

Hops, per cwt.—A. 10/2; B. Free; Br. 1080 per kilo and 10%; Cor. 7½% a v; D. 16/6; F. 5/1; G. 10/2 (gross); Gr. Free; H. Free; I. Free; Nic. As drugs 6d per lb; N. £1 6s 6d; Per. 10%; P. 5% a v; R. 10/2; Rus. 11/10 with an addition of 20% on each rouble of duty leviable; Sal. gw 6d per lb; S. 4/0½; Sn. 5/8; Sz. 1/7½; T. 8% a v; USC. 5d per kilogram; Ven. 4th class.

Horses.—A. Foals with the mare free, horses and foals, other kinds £1 each; B. Free; D. Free; F. Horses and mares £1 4s, foals 14/5; G. £1. (NOTE.—Foals with the mare are admitted free.) Gr. Free; H. Free; I. Free; M. Horses, except geldings, 20 dols. each; N. Free; P. 10/8; R. Stallions £2 8s each, mares 16/, foals 8/; Rus. Free; S. Geldings above the standard height £5 2s 8d, other kinds of horses, mares and foals £1 5s 2d; Sn. Free; Sz. Horses and mares 2/4½, foals 9½d; T. 8% a v. (NOTE.—Animals imported specially for breeding purposes may be admitted free of duty upon satisfactory proof to that effect being given.)

Hose, Indiarubber and Gutta Percha.—See Woven Manufactures.

Hosiery.—See Woven Manufactures.

Household Furniture.—A. Very common, not varnished, polished or coloured, not combined with other materials free, other kinds, rough or painted, stained, varnished, lacquered, or polished, plain or combined with straw, cane, common metals or common leather 3/0½ per cwt, fine carved and turned wares and stuffed furniture of all kinds not covered 12/2, stuffed furniture, covered, also fine inlaid wares £1 0s 4d, iron furniture stuffed and covered or finely ornamented

Ar. B. Br. 15/3; Ar. Household furniture 50% a v; B. 10% a v; Br. Tables, iron or steel, plain, each 2,000 r; do, worked or ornamented, each 4,000 r. Sofas, iron or steel, plain, each 3,000 r; do, worked or ornamented, each 6,000 r. Mattresses, quilts 500 per kilo, sofas

C. Ch. Cor. 2'800 r to 36'000 r; C. Furniture of all kinds 35% a v; Ch. Free; Cor.

D. Japanese 5% a v; other kinds 8% a v; D. Of mahogany, walnut and other fine foreign woods, solid or veneered, plain or combined with other woods, also of all kinds of wood gilt or silvered 16/6, other

E. kinds 7/1; E. Billiard tables and accessories, also furniture of all

F. kinds, 5d per kil, marble slabs 5d; F. Furniture of bent wood, plain 2'10½, furniture other than of bent wood, chairs not carved nor inlaid nor ornamented with copper, of common wood 2'10½, ditto of cabinetmakers' woods (*bois d'ébénisterie*) 4'0½, chairs carved, inlaid or ornamented with copper of any sort of wood 6/1, other than chairs veneered, not carved nor inlaid nor ornamented with copper 4'0½, ditto carved, inlaid or ornamented with copper 10/2, ditto of common woods solid 2'0½, other than chairs of solid cabinetmakers' wood (*bois d'ébénisterie*) with or without mouldings, but not carved nor inlaid nor ornamented with copper 4'0½, ditto carved, inlaid or ornamented with copper 7/4, stuffed, padded or covered furniture of whatever sort 15% additional on the above duties

G. according to class; G. Furniture unstuffed, very common, not including furniture of hard wood or veneered furniture 1/6½

Paper-hangings.—See Paper.

Parasols.—See Umbrellas and Parasols.

Parchment.—See Hides and Skins.

Pasteboard.—See Paper, &c.

Patent Fuel.—See Coal.

Pencils.—See Paper.

Pens.—See Paper, &c., also Iron and Steel.

Pepsine.—I. Acidulated with hydrochloric acid £2 8s.

Perambulators.—See Carriages.

Perfumed Oils.—See Perfumery.

Perfumery, per cwt.—A. Perfumery wares made up, and rouge £2 10s 10d, scented soap 15/3, * non alcoholic scented waters 6/1, * rosemary oil 6/1, * other perfumed oils, pomades, and aromatic vinegar 10/2, * (*when these articles are imported into Austria made up as perfumery wares, they are charged £2 10s 10d per cwt); Ar. Of all kinds 50% a v; B. Scented soap 2 5/4, perfumery wares, as pomatum, perfumed oils, scented waters, rouge, &c. 10% a v, alcoholic scents 5/1 1/2 per gallon; Br. Excluding essences and pure oil 1'000 per kilo, perfumes in pots, flasks, or vases of porcelain, gilded or ornamented, and of No. 2 glass, pay double the respective duties; C. 35% a v; Cor. 20% a v; D. Scented waters, essential oils, and pomatum, scented soap £1 17s 8d per cwt, rouge £1 12s 11d; F. Perfumery mixed with alcohol 1'4 1/2 per gallon of pure spirit, excise duty in addition 5/8, ditto perfumery without admixture of alcohol, scented soap 3/3 per cwt. (NOTE.—An additional excise duty is charged on transparent soap manufactured with alcohol, at the rate of 19/1 per cwt.) Other kinds 4'10 1/2, essential oils other than of roses £2 0s 8d; G. Pomatum and scented oils, also scented waters not containing alcohol, in vessels containing at least 10 kilos 10/2, rosemary oil 6/1, other kinds of perfumery £2 10s 10d, scented soap 15/3; Gr. Perfumery wares, scented soap, pomatum, perfumed waters, &c. £3; Hay. Scented waters in bottles 10d each, in phials or flasks 2/1 per doz; H. Scented waters, essential oils, Macassar oil and perfumery wares 5% a v, scented soap 5/1, excise duty in addition 8/6, perfumery containing alcohol, for each 50% of alcohol import duty 3 1/2d per gallon, excise duty 4 6 1/2; I. Per cwt (including weight of bottle or wrapper) alcoholic £2 0s 7 1/2d, with addition of 144 lire for the alcohol contained, non-alcoholic £2 0s 7 1/2d; NI. Scents and perfumery prepared with alcohol same as spirits, all other 10% a v; Nic. Per lb. Cologne water, Florida water 3 1/2d, aqua fortis, orange, and rose water 2 1/2d, oils, soaps, powders 5d; N. Scented waters not containing spirits, including toilet waters 6d per kilo, perfumed waters and aromatic vinegar (weight of bottles included) £2 16s 6d, essential oils (weight of bottles included) £5 12s 11d, hair oil (weight of bottles included) £1 17s 10d, pomatum (weight of interior package included) 19/9, transparent soap 16/11, other kinds of toilet soap 5/8; PR. Perfumery and essences 58 cs per kilog; P. Perfumery of every description (including bottles, but excepting the boxes of paper or wood) 220 r per kilo; R. Eau de Cologne, and all other scented waters, alcoholic or non-alcoholic, dentifrices, toilette waters, scents of all kinds and perfumed vinegars £2 0s 9d, toilet soaps, pomade of all kinds, and perfumed oil, powders of all kinds, perfumed or not, cosmetiques, liquid or in tablets (almond paste and other) £3 13s 2d; Rus. Perfumed waters without admixture of alcohol, as rose water, orange-flower water, cherry-laurel water, &c. £2 3s 4d, † perfumed spirits eau de Cologne, des Alpes, de la reine de Hongrie, and eau de Melisse £5 8s 4d, † perfumed spirits other kinds, also pomatum £16 5s 1d, † rouge, violet powder, pastilles, tooth powder, sachets, &c.; and all other perfumery and cosmetics not otherwise enumerated (including the weight of wrapper or case) £6 10s 1d, † scented soap £2 19s 1d †, olive oil in half and quarter bottles 6'11 1/2 per poud; S. Perfumery and essences, scented soap £3 13s 6d; Sn. Scented waters (weight of bottles included) £2 16s 6d, pomatum 19/9, essential oils £2 16s 6d, scented soap 15/10; Sz. Scented soap 7 1/2d, essential oils and essences 16/3, perfumery wares 12/2, cosmetics £1 8s 5d; T. All kinds 8%; USC. USC. Florida water, divina, and kananag 1/3, essences, cream, &c) 5/; Ur. Perfumery 51% a v; Ven. 5th class, perfumery, essences, and extracts.

Petroleum, per cwt.—A. Raw and not fit for lighting purposes without refining or purifying, (a) of a density exceeding 830° at 12° Reaumur 1 1/4.

Petroleum—continued.

- (b) of a density of 830° and less 2/0½, raw and fit for lighting purposes without refining or purifying 10'2°, refined or half refined (a) of a density exceeding 870° 1/11½, (b) of a density of 870° and less 10'2, refined of a density of less than 770° for industrial purposes and not intended to be used for lubricating purposes or for lighting (under special conditions) free (*consumption duty included); Ar. Paraffine and stearine per kilo 15 c. kerosine 5 c.; B. All kinds free; Br. 80 to 1'000 per kilo; C. Petroleum, unrefined 15% a v; D. 4 8½; F. Of British origin, raw 7'4, refined 10'2, of other than British origin, or British refining, but imported from England, raw 9'4, refined 12'2; G. All kinds 3'0½. (NOTE.—Mineral oil not intended for lighting purposes may be admitted free by special permission.) Gr. H. I. Gr. 13'9; H. All kinds 5½d; I. In demijohns or other similar vessels:—raw 16'7½, * refined 20'8½, * in other vessels:—raw 15'5½, * refined 19'1½, (Mineral and resinous oils imported in demijohns or similar vessels, barrels, casks, or tins, pay on the net weight; when in other vessels, on the gross weight; but when in bulk, on the actual weight of the oil. Heavy oils distilled to the temperature of 310 degrees:—(1) containing less than 20% of light oil 2'5½† (2) containing from 20% to 30% of light oil 4'10½. Heavy oils imported in bulk pay 20% additional to these duties.) NI. 6% a v. (NOTE.—As soon as an excise duty on petroleum shall be levied to an amount of 1fl 75c per hectolitre, the import duty on this article will be at the rate of 25 c per hectolitre.) Nic. N. All oils 1½d per lb; N. Refuse refined and unrefined 2'3½, oil of resin and residue from the preparation of mineral oil, unrefined and refined (including vaseline and wagon grease) 2'3½; P. 12'6; R. Free; Rus. 9'9, oil of bitter almonds 8. 8n. £2 9s 10½d per pound; S. 8/6½, refined 13/; Sn. Raw free refined 1. 1½; Sz. 6d, aniline oil 4½d, cocoa oil 4½d, animal oil 4½d; T. 8% USC. Ur. a v; USC. Petroleum 5d per kilog; Ur. Not refined 2c per litre, not refined, in casks 1c per litre, refined 20%.

Photographs.—See Paper, &c.

- Pianos.—**A. 10'2 per cwt; B. 6% a v; Br. cottages 120'000 each, grands 180'000 and 30%; C. Pianos and musical instruments of all kinds 35% a v; D. 10%; F. Cottage £2 each, grand £3; G. 15'3 per cwt; Gr. Cottage £3 4s each, grand £5 4s; H. 5% a v; I. Cottage £2 8s each, grand £3; N. Cottage £2 4s 5d, grand £3 6s 8d; P. 30,000 each; R. 6% a v; Rus. Cottage £10 9s each, grand £17 8s 4d; S. £6 19s 4d each; Sn. Cottage £3 6s 8d, grand £5 11s 1d; Sz. 6, 6 per cwt, pedals for pianos 6'4; T. 8% a v.

- Pickles and Sauces, per cwt.—**A. In bottles or jars £2 8s, in casks 1'6½; B. Pickles 4'0½, Sauces 15% a v; Br. 200 and 30% per kilo; D. Sauces 16 6 per cwt, pickles 2'4½; F. Pickles 1'2½, sauces 10'2; G. £1 10s 6d; Gr. Pickles £1 12s, sauces £3 4s; H. Sauces £1 1s 2d, pickles 5% a v; I. Pickles 3'3, sauces 11'2; M. Preserves, pickles, mustard, and sauces, not otherwise distinguished, 1w 0'25; N. Sauces, including weight of bottles 13'7, pickles 11'4; P. Sauces £1 4s 11d, pickles 8'8½; R. Sauces £2 0s 8d; Rus. £1 19s 5d, with an addition of 20% on each rouble of duty leviable; S. £1 16s 7d; Sn. Sauces £1 8s 3d, pickles 16 11; Sz. Pickles in jars exceeding 5 kilos in weight 2'10½, ditto, in jars or bottles of 5 kilos or less in weight 6 6, sauces £1 0s 4½; T. 8% a v.

- Pictures.—**A. Free; Ar. Works of art 40% a v; B. Free; Ch. Paintings 0'1'0'0 each, pictures on pith or rice paper 0'1'0'0 per 100; Cor. Works of art 20% a v, paintings 25%, pictures framed or not 25%; D. Free; F. Free; G. Free; Gr. Free; Hl. Prints, &c., on paper free, all other 10%; Hay. Art works 20% a v; H. Free; I. Free; NI. Free; Nic. Per lb, art work, stationery 3d, paintings, lithographs or photos, loose or in frames, with or without glasses 1'8½, pictures on paper (saints, &c.) 5d; N. Free; Per. Works of art 45% a v; PR. Pictures or paintings, oil 1p 46c each; P. 5'45% a v; R. Free; Rus. Free; S. Oil paintings 8½d each; Sn. Free; Sz. 4½d per cwt; T. 8% a v; Ur. Monuments, statues, &c. (marble) 30½c; Ven. Fifth class, paintings and portraits on canvas, wood, paper, stone, or metal, 1st class, monumental.

Pig Iron.—See Iron and Steel.**Pin-books.—See Paper, &c.****Pipes (Iron).—See Iron and Steel.**

Pitch, per cwt.—A. 6d; B. Free; Cor. 5% a v; D. 6½d; E. Per kilo 1d; F. Free; G. Free; Gr. Free; Hl. Free; Hay. Per barrel 2/1; H. Free; I. Free; Nic. Per lb ½d; N. Free; Per. 20%; P. Free; R. 4/1; Rus. 6d per cwt gross, with an addition of 20% on each rouble of duty leviable; Sal. Per lb g w ½d; S. 2d; Sn. Free; Sz. 1d per cwt; T. 8% a v; USC. Per kilog, block used in constructing vessels 2½d; Ven. Second class.

Pitchforks.—See Iron and Steel.

Plate Glass.—See Glass and Glass Wares.

Playing Cards.—See Paper, &c.

Ploughs and Ploughshares.—See Iron and Steel.

Plush.—See Woven Manufactures.

Polish.—See Grease.

Pomades.—See Perfumery.

Porcelain.—See Earthenware and Porcelain.

Porcelain Plaques.—See Earthenware and Porcelain.

Pork (Salted), per cwt.—A. 3/0½; B. Free; D. Free; F. 1/10; G. 10/2; Gr. Free; H. Salted 10½d, smoked or dried 1/0½; I. 8/2; N. Smoked 11/4, other kinds free; PR. Per 100 kilos, 4 p 6 cts; P. 18/8; R. Salted 12/2, smoked £2 os 8d; Rus. 7/11½; S. 6/1; Sn. Free; Sz. 1/7½; T. 8% a v.

Portmanteaux.—See Hides and Skins.

Printing Type.—See Lead and Lead Wares.

Quiltings.—See Woven Manufactures.

Rails, Railway Carriages, Railway Points, Railway Wheels.—See Iron and Steel.

Ready-made Clothing.—See Indiarubber and Gutta Percha, also Woven Manufactures.

Red Lead.—See Lead and Lead Wares.

Ribbons.—See Woven Manufactures.

Rivets.—See Iron and Steel.

Rock Oils.—See Petroleum.

Rock Salt.—See Salt.

Roofing Slates.—A. Free; B. 1/7½ 1,000; D. Free; F. 1/7½ 1,000; G. 9½d per cwt, entering by sea 3d; Gr. Free; H. Free; I. Free; N. Free; P. Free; R. Not specified; Rus. 3½d per cwt; S. 6d per ton; Sn. Free; Sz. 9½d per ton; T. 8% a v; US. 25%.

Rosin.—A. Common 6d per cwt, refined 1/6, B. Free; Cor. 7½%; D. Brown and yellow rosin 6½d, other kinds 11/9; E. Per kilo 1/0½; F. 9½d; G. Free; Gr. Free; Hl. Free; Hay. Per barrel 2/1; H. Free; I. 1/1; Nic. ½d per lb; N. Free; Per. 10%; P. Common free, other kinds 5/45% a v; R. 4/1 per cwt; Rus. White rosin 1/1, other kinds 3/3; Sal. ½d per lb. g w; S. Pine rosin 2d, other kinds 4/0½; Sn. Free; Sz. Raw 1d, refined 7½d; T. 8% a v; USC. Per kilo ½d.

Rouge.—See Perfumery.

Rugs.—See Woven Manufactures.

Rum.—See Spirits.

Russia Leather.—See Hides and Skins.

Sacking.—See Woven Manufactures.

Saccharine.—B. 140 francs per kilo; P. £3 6s 8d per kilo; S. Prohibited for purposes of food; Sz. 4/ per cwt.

Saddlery and Harness.—See Hides and Skins.

Sailcloth.—See Woven Manufactures.

Sails.—See Woven Manufactures, Linen (Hemp and Jute).

Sal Ammoniac, per cwt.—A. 1/6½; B. Free; Br. 150 and 30% per kilo; D. Free; F. Raw 3/3, refined 4/10½; G. Free; Gr. Free; H. Free; I. 1/7½; N. Free; P. 5% a v; R. Free; Rus. 2/2; S. 4½d; Sn. Free; Sz. 5d; T. 8% a v.

Salmon.—See Fish.

Saltpetre, per cwt.—A. Raw (nitrate of soda) free, refined all kinds 1/6½; B. Free; D. 1/2; F. Free; G. Free; Gr. Free; H. Free; I. Nitrate of soda raw free, ditto refined, and nitrate of potash 1/2½; N. Free; P. Nitrate of potash 7/6, nitrate of soda free; R. Free; Rus. £1 4s 8d, S. Nitrate of potash 7d, nitrate of soda 1½d; Sn. Free; Sz. Unrefined 1d, refined 5d; T. 8% a v.

Salt, per cwt.—**A.** 10½d. Salt can only be imported into Austria by special permission, and is subject to a licence duty in addition of 9/6 per cwt. Under certain conditions salt may be imported free for chemical works and other industrial purposes; **Ar.** 10% a v; **B.** Salt refined and unrefined free; **D.** Rough rock salt in blocks 11½d, other kinds 1/2; **F.** Salt unrefined or refined, if European 1/ per cwt. from Senegal free; **G.** By land frontier 6/6, by sea 6/1; **Gr.** Prohibited; **H.** salt, unrefined free, ditto refined 10/2, excise duty on unrefined salt 7/7; **I** Sea and rock salts prohibited. Every mixture of soluble salts is considered as salt in which "*clora*" exists in proportion greater than 15·2%, and "*sodium*" in greater proportion than 9·8%; **M.** Salt common or for table use g w 0·03; **Nl.** 2fl per 100 kilos; **N.** Rock salt 2d, refined salt in blocks and lumps 1/10½, other cooking salt (at the Custom Houses of Hammerfest, Vardo, and Vadso) 7d per bushel, other cooking salt (at other places) 1½d; **P.** 1/5 per bushel; **R.** Prohibited; **Rus.** Into ports of the White Sea 11½d per cwt, into ports of the Black Sea and Sea of Azov prohibited, on any other frontier 1/11½, imported for the manufacture of soda free; **S.** 2½d, Vichy salts in powder and doses £3 3s 4d per pound gross; **Sn.** Free; **Sz.** Common 1½d, table salt in packets 4·0½. (NOTE.—Salt can only be imported into Switzerland by special permission of the Cantonal authorities.) **T.** Prohibited.

Salted Beef.—See Beef Salted.

Sardines.—See Fish.

Sauces.—See Pickles.

Scarves.—See Woven Manufactures.

Scented Soap.—See Perfumery, also Soaps.

Scented Waters.—See Perfumery.

Scissors.—See Iron and Steel.

Scrap Iron.—See Iron and Steel.

Scythes.—See Iron and Steel.

Sealing-Wax.—See Paper, &c.

Seed Oils, per cwt.—**A.** In casks, skins, and bladders 1·6½, in bottles and jars 10/2; **B.** Free; **Br.** per kilo, 70 to 3·500; **C.** Oil of every kind 25% a v; **Ch.** Hemp seed and cotton, 100 catties 0·3·0·0; **Cor.** Rapeseed 8% a v; **D.** 4/8½; **F.** 2/5½; **G.** In bottles or jars 10/2, in casks 2/0½; **Gr.** 6/4½; **Hay.** Linseed 6d per gallon; **H.** 5½d; **I.** 5/11½; **N.** 2 3½; **PR.** Per 100 kilos 6 pesos 75 c; **P.** Linseed oil 9/11½, other kinds 17/5; **R.** 8/2; **Rus.** 3/4; **Sal.** Linseed 2 4 per gallon; **S.** 9 5; **Sn.** 3/11½; **Sz.** 4½d; **T.** 8/ a v; **USC.** Per kilo. Linseed oil for preparing paint 5d; **Ur.** g w linseed per litre 5 c; **Ven.** 4th class linseed.

Sewing Machines.—See Iron and Steel.

Shawls.—See Woven Manufactures (Silk).

Shears.—See Iron and Steel.

Sheep Skins.—See Hides and Skins.

Sheet Iron.—See Iron and Steel.

Sheets.—See Woven Manufactures.

Shell Fish.—See Fish.

Ships and Boats.—**A.** Of wood, with or without sheathing of iron or copper 9½d per ton measurement, of iron or other metals, and steam vessels of all kinds 10/. (NOTE.—The engines of steam vessels are charged separately.) **B.** Free; **D.** 3% a v; **F.** Sea vessels of wood or iron 1 7½ per ton burden, river boats of wood 8/, ditto of iron £1 12s; **G.** Free; **Gr.** Free; **H.** 1% a v; **I.** Free; **N.** Free; **P.** New or navigable exceeding 200 cubic metres, and steamtugs with a gross tonnage exceeding 300 cubic metres, a tax of 2% a v, sailing or steam ships, new or ready for use, up to 200 cubic metres 12% a v, vessels condemned as unseaworthy (on the sale price) 7% a v; **R.** Steamships of all kinds 1/7½ per ton registered, sailing ships of all kinds 9½d, dredgers 9½d per ton gross, boats common of wood 8' each, ditto gauging up to two tons included 16/. ditto from two to five tons £2, ditto from five to ten tons £4, barges and luggers of deal 4/9½ per ton gross, of oak 8 0½, ditto pleasure boats of wood or metal, or of wood and metal combined £7 4s each; **Rus.** Sea and river-going vessels of every description, with or without rigging (1) iron-built, per ton displacement, first 100 tons 38 roubles per ton, above 100 and

Ships and Boats—continued.

not exceeding 1,500 tons 20 roubles per ton, above 1,500 tons 10 roubles per ton, (2) wooden vessels, per ton displacement, first 100 tons 12 roubles per ton, above 100 tons 12 roubles per ton; iron-built vessels, imported in parts, with or without engines, shall pay duty on each part according to their corresponding sections; all articles entered in a ship's inventory shall also pay duty under corresponding heads of tariff, except such articles as are necessary for the safe navigation of the ship or may be permanently fitted to her hull; **8.** Wooden ships and boats up to 50 tons register £1 12s per ton registered, wooden ships from 51 to 300 tons register £1 0s 10d, ditto of 301 tons register and above 11/2, iron ships of all kinds 10/; **8n.** Free; **8z.** 8% a v; **T.** 8% a v.

Ships' Cables.—See Iron and Steel.

Shot.—See Iron and Steel.

Shovels.—See Iron and Steel.

Silk Yarns and Thread.—See Yarns (Silk).

Silk Woven Manufactures.—See Woven Manufactures (Silk).

Silver.—See Gold and Silver Wares.

Silver Leaf.—See Gold and Silver Wares.

Silver Wares.—See Gold and Silver Wares.

Silver Wire.—See Gold and Silver Wares.

Skates.—See Iron and Steel.

Slag.—See Iron and Steel.

Sledges.—See Carriages.

Snuff.—See Tobacco, &c.

Soaps, per cwt.—**A.** Common 2 6/4, fine soap in cakes, tablets, cases and jars, and scented soap 15/3, solutions in coal tar in casks 9/7, fancy and creoline £1 8s 9d per 100 kilos; **B.** All kinds 2 5/4; **Br.** Not perfumed, black or brown '60 per kilo, yellow '150, white '300; **Ch.** Free; **Cor.** Common 5% a v, superior 10% a v; **D.** Scented soap, soap in tablets and soap powder £1 17s 8d, other kinds 2 4/4; **E.** Per kilo 1/0 1/4; **F.** Scented 3/3, * other 2 5/4, (*exclusive of excise duty on transparent soap, see Perfumery); **G.** Soft soap 2 6/4, hard soap not otherwise specified, in bars, &c. 5/1, soap in tablets, balls, boxes, jars, pots, &c., perfumed soap of all kinds 15/3; **Gr.** Common 6/4 1/4, other, not scented 12/0 1/4, scented £8; **Hl.** Free; **Hay.** Per cwt 4/2, toilet per dozen 8d; **H.** Scented soap 5/1, excise duty in addition 8/6, other kinds 3/9 1/4, excise duty in addition 8/6; **I.** Common 3/3, perfumed 15/3, *glycerine 24/4 1/4, (*Soap in tablets, balls, or boxes is subject to the same duty as perfumed soap); **J.** Soap bar 50 cents per 100 cattie; **Nic.** 1/4d per lb, perfumed 4d; **N.** Soft soap 1/10 1/4, transparent soap 16/11, other kinds 5/8; **Per.** 70%; **PR.** Per 100 kilos, common 3 pes 75 cts; **P.** 50 r per kilo; **R.** Soap except perfumed 12/2, toilet £3 13s 2d; **Rus.** Soap of all kinds not perfumed 14/9, * ditto scented in cakes, in powder or liquid £2 19s 1d; **Sal.** Common 3 1/4d, fancy 9d per lb, g w; **S.** Common 6/5, scented £3 11s; **8n.** Soft soap 2/10, other kinds not perfumed 5/8, perfumed 15/10; **8z.** 7 1/4d; **T.** All kinds 8% a v; **USC.** Per kilo, common, of oil 10d, of rosin, or tallow 2 1/4d, perfumed 5/; **Ven.** 5th class, common, Castile, perfumed.

Soda, Carbonate of, Bicarbonate of, Caustic, Crystals of, and Soda Ash.—See Alkali.

Soda, Sulphite and Hyposulphite of.—See Bleaching Materials.

Sole Leather.—See Hides and Skins.

Spirits, per cwt.—**A.** Spirits, plain, of all kinds £3 1s 0d. liqueurs, punch, arrack, rum and other sweetened spirituous liquors £3 17s 3d. (NOTE.—Consumption duty is included in the above rates.) **Ar.** Of all kinds 45% a v, wine, common, in casks 8 cts per litre, ditto fine, in casks 25 cts, ditto of all kinds, in bottles not more than 1 litre 25 cts, beer or cider 15 cts, spirits of wine in casks not exceeding 30 degrees 15 c. per kilo, brandy, gin, anis, cherry brandy, bitters not above 25 degrees 20 c, bottled spirits of wine not above 25 degrees per litre 20 c, liqueurs, sweet or bitter up to 25 degrees 25 c per litre; **B.** Spirits for drinking and liqueurs of all kinds, import duty, in casks of 50 degrees strength or less 3/7 1/4 (per gallon), ditto for every degree above 50 degrees '87d, in bottles of whatever strength 7/3 1/4, excise duty in addition 5% of the above duties, other spirits 4/10 1/4; **Br.** Per litre, absinthe, Kirsch Wasser '900 and 40%, alcohol, brandy, cognac, rum, whisky '600 and 40%, Geneva '220 and 40%, all other kinds '400 and 40%, mineral water '100 and 30% per kilo; **C.** 42 cts per litre, **D.** Geneva 32 cts, rum 42 cts; **D.** Spirits, plain, in casks or bottles 2/7 1/4, in casks, of 8 Danish degrees of strength and less 1/2 1/4. (NOTE.—

Spirits—continued.

- An additional duty of $\frac{1}{4}$ d per gallon is levied for every $\frac{1}{2}$ of a degree of strength above 8.) Spirits, sweetened, in flasks and bottles $2\frac{7}{8}$ per cwt, in casks $1\frac{1}{11}\frac{1}{2}$; E. Per kil, 6d; F. Import duty, brandy and liqueurs in bottles $1\frac{1}{11}$ per gallon, brandy in casks $1\frac{1}{11}$ per gallon of pure alcohol, other kinds, except absinthe, in casks or bottles 1 1, ditto excise duty in addition, brandy, liqueurs and absinthe 5 8
- G. Gr. ditto; G. All kinds £2 os 8d per cwt; Gr. Rosoglio and other liqueurs £3 4s, all other spirituous liquors up to 70 degrees of the areometer (centigrade), including brandy, $1\frac{1}{11}\frac{1}{2}$ per gallon, over 70 degrees $2\frac{9}{11}$; Hl. Alcohol and others of same strength, per gallon £2 1s 8d, alcohol for mechanical and scientific purposes, per gallon
- Hay. $2\frac{1}{11}$; Hay. Brandy, per gallon $2\frac{1}{11}$, per box of 12 bottles $4\frac{2}{11}$, per box, quarts, 12 bottles $6\frac{3}{11}$; spirit of wine per gallon $2\frac{1}{11}$; gin ditto $1\frac{0}{11}$, ditto box of 12 flasks $3\frac{1}{11}\frac{1}{2}$, ditto ditto pints $2\frac{1}{11}$; H. Spirits of all kinds (50% alcohol), import duty $3\frac{1}{4}$ d, excise duty in addition $4\frac{6}{11}$.
- I. (NOTE.—Methylated spirits are exempt from excise duty.) I. Pure in casks, &c, (casks, &c., included) $9\frac{6}{11}$ per hectolitre, sweetened or flavoured in casks, &c, (casks, &c, included) 48 per hectolitre; all kinds in bottles, from $\frac{1}{2}$ to 1 litre in capacity 5.76d per bottle, $\frac{1}{2}$ litre or less $4\frac{3}{11}$ d per bottle; M. Spirits of all kinds, in bottles, without allowance for breakage or leakage, n w 0.50, ditto in wood n w 0.40; Nl. Per hectolitre of liquid containing 50 litres of alcohol at a temperature of 15 deg. of the cent. thermometer £3 16s 8d, or in case the excise duty on native spirits levied in N.I. is higher, so many florins more as shall be fixed by Colonial ordinance; Nic. Per lb. Foreign spirits more than 12 degrees up to 25 inclusive, by the Carthier alcoholmeter bottle $1\frac{1}{8}$, ditto more than 25 degrees (with special authority of the Government) same duty, with an increase per degree in excess of $1\frac{1}{8}$ d, all kinds in casks $1\frac{1}{8}$ d, ditto sparkling $2\frac{1}{8}$ d; N. Spirits, in flasks or bottles $6\frac{1}{10}$, in casks, &c. (of proof strength) £5 1s 8d per cwt. NOTE.—For every $\frac{1}{2}$ degree below proof, deductions of duty are made as follows below:—
- | | | |
|-----------|--------------------|----------------|
| 100 to 90 | deduction of | 8.12d per cwt. |
| 90 | " 85 " " | 7.45d " |
| 85 | " 75 " " | 7.11d " |
| 75 | " 60 " " | 6.43d " |
| 60 | " 45 " " | 6.09d " |
| 45 | " 25 " " | 4.41d " |
| 25 | " " " " | 5.08d " |
- (2) Sweetened spirits, or spirits mixed with any substance affecting the alleged strength pay as spirits of 100 degrees strength; Per. 70%; PR. Per hectolitre, brandy, common, and aniseed 4 p 06 c; gin 4 p 64 c; cognac brandy, and rum 13 p 85 c; liquors, per litre 20 c; P. Brandy and alcohol pure, in casks and demijohns, per decalitre of pure spirit 1.500 r, ditto in bottles, &c., liquids not otherwise distinguished, per decalitre of liquid 1.900 r; R. All kinds 10.2 per cwt; Rus. Arrack, rum French brandy and spirits distilled from plums, in barrels or casks £5 8s 4d per cwt gross, in bottles $2\frac{1}{4}\frac{1}{2}$ per bottle, gin, whisky, liqueurs, Kirsch Wasser, spirituous infusions and corn spirit, in bottles $2\frac{1}{4}\frac{1}{2}$. (NOTE.—The importation of corn spirit in casks is prohibited. Sal. £1 10s 10d per dozen; S. Brandy, &c. $7\frac{1}{4}$ d per gallon, transitory duty in addition to above $1\frac{1}{4}$ d per gallon, liqueurs $2\frac{9}{11}$.) Sn. Per gallon, brandies and spirits, in casks or barrels, of corn, potatoes, and other agricultural products (of the strength of 50% of alcohol weighed at the temperature of 15° Celsius) $3\frac{9}{11}$ of rice (arrack), also of sugar (rum) $3\frac{9}{11}$; of the grape, when manufactured in France and imported direct by sea $9\frac{1}{11}$ d, ditto when otherwise manufactured or imported, also of other fruits $3\frac{9}{11}$, in other receptacles of any description (without regard to alcoholic strength) $1\frac{2}{11}$, liqueurs $1\frac{7}{99}$; Sz. Currant wine in casks $2\frac{1}{4}\frac{1}{2}$; T. All kinds 8% a v, empty casks for exportation of native wine $1\frac{1}{2}$; USC. Per kilo, brandy, rum, gin, whisky, &c., and the essences for making same, 1.8; Ur. Cognac, anise, bitters, rum, whisky, absinthe, and other alcoholic beverages, and in casks up to 20° per litre 15 cts, in bottles 25 cts; liqueurs and syrups 26 cts per litre; Ven. Cane rum (importation prohibited) 3rd class, red Bordeaux wine, all wines except Spanish in pipes, kegs or barrels; 4th class, all wines except Spanish and Bordeaux in demijohns and bottles; 5th class liquors (sweet) not specified; 6th class Spanish wine; 7th class brandy, gin, spirits of wine, and all liquors to 22° Cartier's scale.

Starch, per cwt.—A. Starch for textile dressers, under special conditions $1\frac{1}{6}$, other kinds $6\frac{1}{2}$; Ar. Starch 7 cts per kilo, flour of wheat or maize 4 cts, vermicelli 7 cts; B. Free; Cor. $7\frac{1}{2}\%$ a v; D. Free; E. Per kilo $2\frac{1}{2}$ d; F. $1\frac{1}{7}$; G. $6\frac{1}{5}$; Gr. Common rice $4\frac{1}{9}$ per cwt, common other $3\frac{1}{2}$, superior in boxes $5\frac{1}{12}$; Hl. Free; M. Free; L. Common $3\frac{1}{3}$ '014, fine in boxes $4\frac{1}{10}$ '521; Nic. As sago and maizena 2d per lb; N. $1\frac{1}{10}$; Per. 40%; PR. Per 100 kilos 3 pes 60 cts; P. $12\frac{1}{6}$; R. $16\frac{1}{4}$; Rus. $13\frac{1}{9}$; S. $3\frac{1}{8}$; Sn. $5\frac{1}{8}$; Sz. 3d; T. 8% a v; Ur. g w 7 cts per kilo; Ven. Prohibited.

Stationery.—See Paper.

Steel and Steel Wares.—See Iron and Steel.

Stones.—Ar. Paving, flag, and trotting flag stones 30% a v; Rus. Whetstones $\pounds 2$ 5s per pound; Sz. Plastiline for modelling 7d, paper stone for fire-proof walls and ceilings $3\frac{1}{2}$ d per cwt, common stone for paving $4\frac{1}{2}$ d.

Stoneware.—See Earthenware.

Stoves.—See Iron and Steel.

Stockings.—See Woven Manufactures (Silk).

Straw Plaiting for Hats, per cwt.—A. $2\frac{1}{4}$; B. Free; D. Of fine or coloured straw $\pounds 7$ 10s 7d, of other straw $\pounds 2$ 16s 6d; F. $2\frac{1}{4}$; G. $12\frac{1}{2}$; Gr. $\pounds 6$ 8s; H. Free; L. Plaits of straw, bark, esparto, &c., for hats $4\frac{1}{2}$; of straw for ropes and other articles free; N. $\pounds 2$ 12s 6d; P. $\pounds 6$ 4s 8d; R. $\pounds 1$ 12s 8d; Rus. Plain or mixed with cotton, hemp, silk or horse hair $\pounds 17$ 6s 9d, painted straw 2/ with an addition of 20% on each rouble of duty leviable in each case; S. $12\frac{1}{3}$; Sn. $\pounds 2$ 16s 6d; Sz. $4\frac{1}{2}$; T. 8% a v.

Strings for Musical Instruments.—See Brass and Iron and Steel; also Copper.

Sugar, per cwt.—A. Beetroot and all kinds (raw), excepting not edible syrups Ar. $11\frac{1}{2}$, other refined $4\frac{1}{2}$ d, unrefined $3\frac{1}{2}$ d; Ar. Per kilo, refined 9c, unrefined 7c, sugar candies '300 and 30%, glucose '060 and 30%, all other kinds '130 and 30%; B. Import duty, refined candy, 1st class $\pounds 1$ 3s 4d, * ditto 2nd class $\pounds 1$ 1s $4\frac{1}{2}$ d, * loaf 19s 9 $\frac{1}{2}$ d, * above No. 18 Dutch standard free but chargeable with an excise duty equal to the import duty on refined loaf sugar, raw, all kinds free but subject to a surtax of 15% of the amount of the excise duty payable, molasses containing less than 50% of saccharine matter $7\frac{1}{3}$, ditto for distillation free, * excise duty on raw, from No. 15 to No. 18 inclusive 19/6, from No. 10 to No. 15 $18\frac{1}{3}$, from No. 7 to No. 10, $16\frac{1}{4}$, below No. 7 and molasses containing 50% or more of saccharine matter, also syrups Br. containing crystallisable sugar $13\frac{1}{11}$; Br. Candy '560 per kilo, raisin C. or glucose '100 per kilo, any other kind '240 per kilo; C. Sugar of Ch. all kinds 35% a v; Ch. Brown (No. 1 to No. 10 inclusive, Dutch standard) 1,000 catties 0'1'2'0, candy 0'2'5'0, white (No. 11 and upwards, Dutch standard) 0'2'0'0; Cor. Sugar and molasses $7\frac{1}{2}\%$ a v; D. D. Sugar, refined candy, lump or powdered, of No. 19 Dutch standard and above, $12\frac{1}{4}$, additional duty $2\frac{1}{10}$, unrefined, except muscovado, from No. 15 to No. 18 Dutch standard $8\frac{1}{8}$, additional duty $2\frac{1}{7}$, unrefined, from No. 10 to No. 14, and muscovado from No. 15 to No. 18 Dutch standard $8\frac{1}{3}$, additional duty $2\frac{1}{4}$, unrefined inferior to No. 10 and muscovado inferior to No. 15 Dutch standard, also syrup $7\frac{1}{6}$, additional duty $2\frac{1}{12}$, molasses 4 1, additional duty $1\frac{1}{3}$; E. Per kilo $2\frac{1}{2}$ d molasses; F. Unrefined, moist sugar, the estimated yield thereof at the refinery being 98% of refined sugar or less $2\frac{1}{10}$ net and $\pounds 1$ 0s 4d per cwt. of refined sugar, more than 98% $\pounds 1$ 3s 7d, refined, other than candy $\pounds 1$ 3s 7d, candy $\pounds 1$ 5s, molasses for distillation free, molasses other than for distillation, containing 50% of saccharine matter or less $6\frac{1}{12}$, molasses other than for distillation, containing more than 50% $13\frac{1}{2}$, native glucoses $5\frac{1}{2}$ per cwt; G. Sugar, refined, candy or lump and unrefined of No. 19 Dutch standard and above $15\frac{1}{3}$, unrefined below No. 19 Dutch standard $12\frac{1}{2}$, syrup or molasses $7\frac{1}{7}$, molasses for use in distillation free; Gr. Refined and glucose $\pounds 1$ 3s 11d, unrefined and molasses 8/; Hl. Hay. H. Hl. And molasses free; Hay. Per cwt refined 14/; H. Unrefined (excise duty) of a saccharine richness of more than 98% $\pounds 1$ 2s 10d, of a saccharine richness of not more than 98% for every percentage of its quality $2\frac{1}{2}$ d, treacle or molasses containing 10% or less of solid sugar (import duty) $5\frac{1}{1}$, refined (excise duty) candy, 1st class $\pounds 1$ 7s, ditto 2nd class $\pounds 1$ 4s 6d, melis, lump and loaf $\pounds 1$ 2s 10d; I. 1st class, superior to Dutch standard No. 20 $\pounds 1$ 11s 10'82d, 2nd class, inferior to Dutch

* With an addition of 15% of the duty as surtax.

Sugar—continued.

- J. standard No. 20 £1 6s 6²/₁₁, molasses 4/0⁷/₆₈; J. White 75 cents
 Nic. per 100 catties, brown and black 40 cents; Nic. Sugar and
 N. Molasses 2d per lb; N. Sugar, all kinds £1 3s 2d syrup or molasses
 Per. PR. P. free; Per. Sugar 70%, molasses 40%; PR. per 100 kilos, 9 pesos; P.
 Per kilo, sugar refined on the Portuguese system, as well as sugar
 superior to No. 20 Dutch standard* 135 r, sugar not otherwise classi-
 R. fied* 110 r, molasses and honey 23 r; R. Raw and cassonades, in powder
 4/10¹/₂, refined sugar candy and dissolved sugar 8/2, syrups and
 Rus. molasses 2/5¹/₂; Rus. Sugar, raw, at ports of the Black Sea or
 Sea of Azov 9/2¹/₂ per poud, at other ports or by the land frontier
 9/6 per pond, sugar, refined in loaves, pieces or lump and
 sugar candy, at ports of the Black Sea or Sea of Azov 12/0¹/₂
 per poud, at other ports or by the land frontier 12/4¹/₂ per
 Sal. 8. poud, molasses 11/10; Sal. Per lb g w 3¹/₂d; S. Sugar of
 Sn. all kinds, import duty 12/6, transitory duty 5/6; Sn. Sugar
 unrefined, up to No. 18 Dutch standard 13/3, ditto No. 18
 Dutch standard and above 18/8, refined, including candy, loaf
 Sz. and powdered sugar, 18/8, syrup or molasses 5/8; Sz. Unrefined
 sugar candy and glucose 3/0¹/₂, refined, in lumps and loaves 3/5¹/₂,
 in cubes and fine powder 4/0¹/₂, molasses and dark syrup 9¹/₂d, grape
 sugar in syrup 2/9¹/₂, grape sugar, solid 2/11¹/₂, hemoglobine syrup £2;
 T. USC. Ur. T. All kinds 8% a v; USC. Per kilo 2¹/₂d; Ur. Refined g w 5 cts
 Ven. per kilo, not refined g w 4 cts; Ven. Sugar and molasses prohibited.

Sulphate of Iron (Green Copperas).—See Copperas.

Sulphur (Flowers of).—See Brimstone.

Surgical Instruments.—See Iron and Steel.

Sweetmeats.—See Confectionery.

Swords.—See Iron and Steel.

Tallow.—See Grease.

Tapes.—See Woven Manufactures.

Tarpaulins and Tarpaulin Cloths.—See Woven Manufactures.

Tenders for Locomotives.—See Iron and Steel.

Terra Cotta.—See Earthenware and Porcelain.

Thread.—See Yarns.

Tiles.—See Earthenware and Porcelain.

Timber.—Nl. Flooring boards 5% a v; N. Staves for casks, &c., only when
 planed, old 10%; Sn. Wood for polishing and boards for manu-
 facture of boxes, pine 1¹/₂d per kilo, fir 1¹/₂d; Sz. Wooden sieves,
 common, 4/9 per cwt, fine 15/10, boards of plaster and reeds 7¹/₂d
 per cwt.

- Tin and Tin Wares, per cwt.**—A. Tin, blocks, ingots and old broken tin free, bars,
 plates, sheets or wire, tubes and coarse castings plain or combined with
 wood or sheet or bar iron 4/0¹/₂, tin wares, common, as kettles, dishes,
 plates, &c., not lacquered and not combined with other materials 5/1,
 other tin wares 15/3; Ar. Tin plates 5% a v; B. Tin, unmanufactured,
 Ar. B. all kinds free, tin wares 10% a v; Br. Per kilo, tin, calaim (Indian
 Br. tin), tutenag, prince's metal, and other alloys: in bars, rods, beads,
 ashes, or powder, in sheets, pieces or scrap, or in any other unmanu-
 factured state 100 r, in jewellery of any description, plain, varnished,
 gilded, silver-plated, or in rosaries, or with false stones 4,000 r, in
 thin leaves for bottles, in capsules, and fastenings for the same, &c.,
 350 r, in tubes for stills, &c. 120 r. In plates: for engraving
 music 350 r, engraved or with inscriptions for letters, music, &c.,
 plain or mounted on wood or stereotype plates 700 r, in weights or
 markers for scales 160. Articles not otherwise mentioned: plain
 800 r, silvered or bronzed, wholly or in part 1,600 r, gilded, wholly or
 in part 2,400 r; C. In bars free; Ch. Tin 1²/₅ 5/0 per 100 catties,
 C. Ch. tin plates 0⁴/₁₀ 0/0; Cor. 7¹/₂% a v; D. in Tin ingots, bars, &c. free,
 Cor. D. sheets, pipes, kettles, pans, &c. 2/4¹/₂, tin wares, varnished, painted
 E. or lacquered £1 17s 8d, other kinds 18/10; E. Per kilo 2¹/₂d;
 F. F. Tin, pure, in ingots, bars or slabs, pure, filings and
 old broken articles free, alloyed with antimony (Britannia
 metal) in pigs 2/0¹/₂, pure or alloyed, hammered or rolled
 2/5¹/₂, tin wares, pots, pans and other manufactures of tin,
 G. pure or alloyed with antimony 12/2; G. Tin, pure or alloyed with
 lead, antimony or zinc, raw or broken free, rolled 1/6¹/₂, tin wares,
 coarse, plain or in combination with wood, iron, lead or zinc, not
 polished or lacquered also wire, 3/0¹/₂, fine wares, plain or mixed with

* The provision contained in the law of March 22, 1886, suspending until the year 1889 the law of December 27, 1870, is maintained in force.

Tin and Tin Wares—continued.

- other materials (provided they cannot be classified under the head of small ornamental wares), also lacquered wares 12½, small ornamental wares £5 1s 7d; Gr. Tin, unmanufactured, in ingots, bars, plates or sheets 6¼, tin wares, household articles, &c. 12/9½, ditto gilt or silvered £1 12s; Hl. 10%; Hay. Double, per 100 sheets 8/4, single 4/2; H. Tin, unmanufactured and foil, free, tin wares 5% a v; I. Tin and its alloys with lead and antimony, ingots, cakes, bars and old tin free, hammered, in sheets or foil of any sort 5/11½, tin wares 7/11, varnished 15/10; J. Tin 3 boos per 100 catties, tin plates 70 cents per box of 90 catties; M. Per kilo, block tin in bars or in the rough g w o'10, ditto in plates, sheets, and other manufactures, g w o'20, tin in sheets up to 40 centimetres long by 30 wide, neither stamped nor painted, also tinned iron tubing free; Nl. Free; Nic. Nic. Per lb manufactures of every kind 5d, tin cartridges 5d, N. in bars or sheets 1½d; N. Tin, in ingots bars or sheets, also filings, tubes and pipes free, tin wares, gilt, silvered or plated £1 19s 6d, other kinds, including tinfoil 19/9; Per. Tin 45%; PR. PR. Per 100 kilos, in bars or bullion, sheets, nails, wire, P. and pipes 3 pesos 68 cts, manufactured 8 pesos 70 cts; P. Tin, old broken articles, cast and hammered or rolled, alloyed for solder free, tin wares 11/9; R. Tin, unwrought in any form, filings, old broken articles, alloys of tin and antimony in pieces (Britannia metal), tin, pure and alloys, beaten or rolled, tin in sheets free, articles of tin, pure or combined with lead or zinc, and articles of Britannia metal neither gilt nor silvered £2 os 10d; Rus. Tin in ingots, rods and scrap 3/11½,* in sheets and amalgam for mirrors 6'11,† tin wares, not polished nor painted 10/10,‡ polished or painted £1 7s 1d;† Sal. Bars and sheets per lb g w 6d, prepared for domestic, or other uses, ditto, ditto 7½d, painted or ornamental, per lb 9½d, baths, each, £1 10s 10½d, S. baths, sitz, ditto 12/4; S. Tin in ingots or bars 4/3½, tin wares, plain or lacquered 6/9, ditto gilded, silvered or nickelled 18/3; Sn. Tin, unwrought, also old or broken tin wares free, tin wares not lacquered nor painted 19/9, lacquered or painted £1 19s 6d, tin foil 19/9; Sz. Tin in rough pieces, blocks, bars or plates, filings and old broken articles 7½d, tin, pure or alloyed with other metals (Britannia metal), hammered or rolled, sheets or wire, tinfoil, 1/2½, tin wares not polished or painted 2/10½, ditto polished, painted or varnished and articles of Britannia metal 6/6; T. All kinds 8% a v, bassinettes of tin with perforated sides, neither painted, polished, nor varnished 3/6 per cwt; Ur. Tin, sheets or ingots 20% a v; Ven. Ven. 3rd class, pure or alloyed, unmanufactured, and tinned basins, 4th class, manufactured, not specified, 6th class, eyelets, hooks and eyes.

Tin and Terne Plates.—See Iron and steel, also Tin and Tin Wares.

Tissues.—See Woven Manufactures.

- Tobaccos, Cigars and Snuff, per cwt.**—A.* Tobacco unmanufactured in leaves, stalks, and stems £1 1s 4d, ditto manufactured, stemmed, rolled, and cut tobacco for smoking, tobacco waste, chewing tobacco, cigars and cigarettes, snuff and tobacco for making snuff £2 13s 4d; Ar. B. Ar. Tobacco 50% a v, cigars, snuff of all sorts 60% a v; B. Unmanufactured leaves, ditto stalks £1 8s 5d, cigars and cigarettes £6 1s 11d, Br. other manufactured tobacco £2 os 8d; Br. In cheroots 5'100 per 100, cigars 3'500 per kilo, leaves 5'20 per kilo, for chewing, &c. 1'100 per kilo, cut for pipes and cigars 1'400 per kilo, snuff 3'000 per kilo, prepared in any other manner 5'500 per kilo; C. Havanna tobacco in leaves or cut in any form 1'50 pesos per kilo, any other kind 1 peso per kilo; Ch. Snuff, per 100 catties 7'2'0'0; cigars, including cigar cases, holders, and pipes, free, foreign tobacco free, leaf, 100 catties 0'1'5'0, prepared 0'4'5'0; Cor. Leaf 20% a v, cigars and cigarettes 20%; D. Leaves and stalks 11/9, additional tax 4/8½, cigars £3 15s 3d, E. additional tax 18/10, other kinds 18/10, additional tax 4/8½; E. F. Per kilo leaf, cigars and cigarettes 2/1; F. Tobaccos unmanufactured (leaf or stalk), for the Régie free, for private account prohibited, tobacco manufactured for the Régie free, for private account prohibited, tobacco juice (sauce prais) prohibited. (NOTE.—Tobacco for personal use may be admitted under

* Tobacco can only be imported into A. by special permission, and is subject to a licence duty in addition, on raw tobacco 6¼ per lb, on cigars and cigarettes 10/, on other manufactured tobacco 7/8.

Tobaccos, Cigars, and Snuff—continued.

- certain regulations to the extent of 10 kilos per individual per annum, at the following rates, cigars and cigarettes 13¹/₂ per lb, Turkish tobacco 9¹/₂ per cwt, other kinds and snuff 5¹/₅.) **G.** Unmanufactured leaves and stalks £2 3s 2d per cwt, manufactured cigars and cigarettes £6 17s 2d, other kinds £4 11s 5d; **Gr.** In leaves £4 16s, cut in carrots or rolls £5 12s, cigars and cigarettes £9 12s, snuff £5 12s; **Hi.** Leaf free; cigars and cigarettes free; **Hay.** Per cwt, roll £2 6s 8d, leaf and chewing 18¹/₈, snuff £4 13s 4d, cigars per 100 1.0¹/₂; **H.** In leaves and rolls unstemmed 7d, ditto stemmed 1¹/₃½, snuff and other manufactures 10¹/₂, cigars £1 13s 11d; **I.** Unmanufactured in leaves and stalks prohibited, cigars Havana or similar quality £7 12s 6d, other manufactured tobacco £40 12s 10d; **J.** 1000 80 cents per 100 cabbies; **Nic.** Per lb Government monopoly, Havanna only (by special permit) 3¹/₅½, chewing (allowed) 1¹/₈½ in rolls, or snuff 18 per lb; **Ni.** **Ni.** Tobacco and snuff 8 fl. per 100 kilos, Manilla cigars 200 fl. per 100 kilos, other cigars and cigarettes 50 fl. per 100 kilos; **N.** Stalks, leaves, not steeped and steeped £4 18s 9½d, snuff £5 18 6½d, cigars and cigarettes £10 3s 2½d, all other manufactured tobacco £5 18s 6½d; **Per.** **Per.** Leaf 70%; cigars and cigarettes 70%; **PR.** (Manufactured), all kinds, per kilo 70 cts; (unmanufactured) leaf, per kilo 35 cts; **P.** **P.** Cigars £1 per kilo, all other kinds tobacco £1 per kilo; **R.** **Rus.** **R.** Prohibited; **Rus.** In leaf or packets, with or without stalks £7 9s 4d, tobacco for smoking, snuff, cut, of every kind, twisted in rolls, cakes, &c. £26 2s 8d, cigars and cut tobacco rolled in tobacco leaves £63 9s 4d; **Sal.** Per lb g w leaf 9½d, cigars and cigarettes, £1 1s 7½d; **S.** Prohibited; **Sn.** Unmanufactured £2 16s 6d, manufactured cigars and cigarettes £8 9s 5d, other kinds £3 7s 9d; **Sz.** **Sz.** Tobacco unmanufactured in leaves, stalks, and waste 10¹/₂, ditto carrots or rolls for manufacture of snuff 14¹/₃, snuff £1 0s 4d, cigars and cigarettes £2 0s 8d, other manufactured tobacco £1 0s 4d, tobacco extract 3¹/₁₁½; **T.** Prohibited; **USC.** Per kilo, in leaves or cut for cigarettes, 2½d, prepared for chewing 1¹/₃, manufactured 2¹/₆; **Ur.** Snuff 51% a v, tobacco from 18 cts to 35 cts per kilo, cigarettes from 60 cts to 1¹/₆0 cts, cigars from 56 cts to 2¹/₈0 cts; **Von.** **Von.** Chewing prohibited, 4th class cigarette and prepared for cigars, 7th class leaf and manufactured cigarettes, 8th class manufactured, not specified.

Tobacco Pipes.—See Earthenware and Porcelain.

Tools (Awls, Gimlets, Files, Saws, Vices, &c.)—See Iron and Steel.

Towels.—See Woven Manufactures.

Toys, per cwt.—**A.** Of wood, most common, planed, carved or turned free, ditto fine, also in combination with other materials £1 0s 4d, of iron or steel 15¹/₃, combined with silk, lace, artificial flowers and ornamental feathers £5 1s 7d, ditto other woven or knitted materials £2 10s 10d; **B.** 10% a v; **D.** £1 17s 8d; **F.** £1 4s 5d; **G.** As materials of which made; **Gr.** £8; **H.** 5% a v; **I.** 23¹/₉; **N.** All kinds £1 13s 11d; **P.** £2 7s 1d; **R.** Toys of wood, common metals, earthenware, porcelain, glass, paper, leather or caoutchouc with or without admixture of other common materials and all toys for children, with the exception of those composed or partly composed of ivory, tortoise-shell, mother-of-pearl, or precious metals £2 0s 8d; **Rus.** £7 5s 10d; **S.** £2 12s 9d; **Sn.** Of wood or mixed material £4 4s 8d. (NOTE.—Other kinds of toys pay as the materials of which made.) **Sz.** 6¹/₆; **T.** 8% a v.

Tramway Carriages.—See Carriages.

Tricycles.—See Carriages.

Tulle.—See Woven Manufactures.

Turpentine, per cwt.—**A.** 1¹/₆½; **B.** Free; **D.** 4¹/₈½; **F.** Essence of turpentine 2.0¹/₂; **G.** Free; **Gr.** 9¹/₇½; **H.** Free; **I.** Free; **N.** Oil of turpentine 3¹/₉½; **Nic.** Oil of turpentine, gaseous mineral oil, acidulated waters 9¹/₄; **P.** 1¹/₃; **R.** 4¹/₁, other kinds 1¹/₇½; **Rus.** 3¹/₃; **S.** 4.0¹/₂; **Sn.** 3¹/₁₁½; **Sz.** Not specified; **T.** 8% a v.

Twine.—See Cordage.

Umbrellas and Parasols.—**A.** Of silk 11½d each, other kinds 5½d; **B.** Umbrellas and parasols 10% a v, parts thereof 5%; **Br.** Umbrellas and parasols of silk 2¹/₀₀₀ each and 30% a v; **C.** Ditto of all kinds 35% a v; **Ch.** 0¹/₀ 3¹/₅ each; **Cor.** Paper 5% a v, foreign 10% a v.; **D.** Covered with silk or half silk 1¹/₅½ each, ditto with other materials or uncovered 6½d; **F.** Cotton 2½d, alpaca 4½d, silk 1¹/₂; **G.** £3 0s 11d per cwt; **Gr.** Of wool or of linen or cotton or of linen mixed with cotton 5½d each ditto mixed with silk 1¹/₂½d, ditto of silk 2¹/₅, ditto ornamented with lac

Umbrellas and Parasols—continued.

or embroidery 25% a v, frames and sticks of wood or common metal 16/ per cwt. (NOTE.—Frames and sticks of other kinds are chargeable with the duties upon the materials of which made.) **Hay.** Sunshades, parasols of every size and shape, each 2/6, ditto, ditto, for children 10d, woollen stuff, each, 1/3, cotton, each, 9d; **H.** 5% a v; **I.** Of silk 1/1·224 each, of other materials 7·68d each, parts thereof 12·2 per cwt; **Nic.** Per lb cotton 7½d, wool 1·0½, silk 1/8; **N.** Of silk or half silk 10d each, of other materials 3½d, framework not covered 19/9 per cwt; **PR.** Per dozen, umbrellas and parasols, cotton 1 peso 74 cts, silk and other 6 pesos 96 cts; **P.** Umbrellas and sunshades, covered with silk, 535 r each, ditto, covered with other stuffs 320 r each, frames, complete, for umbrellas or sunshades, without covers 320 r each, ditto, incomplete, for umbrellas or sunshades, in separate pieces 1·300 r per kilo; **R.** Of cotton, linen or wool with frames of whalebone or iron with handles of plain or carved wood, combined or not with bone or common metals, gilt, silvered or not 1/8 each, of silk, pure or mixed, of cotton, linen or wool, lined with silk pure or mixed 3/8; **Rus.** Men's umbrellas of silk, and ladies' silk umbrellas or parasols lined with silk 5/3,† men's alpaca umbrellas and ladies' unlined silk umbrellas, &c. 2/1,† other kinds of umbrellas or parasols £1 7s 1d per cwt; **Sal.** 36in per dozen 10/11, 20in 7/9½; **S.** Of silk 1/ each, of other materials 7d; **Sn.** Of silk or half silk 10d, other kinds 3½d, parts thereof, framework, &c. 19/9 per cwt, ditto coverings of umbrellas, cut or sewn and cases of umbrellas as material of which made with an addition of 20%; **Sz.** Of silk and cotton 11/10½, wool and silk 19/9½; **T.** 8% a v; **USC.** Per kilo, 3 4.

Varnish.—See Grease.

Velocipedes.—See Carriages, also Iron and Steel.

Velvet and Velveteens.—See Woven Manufactures.

Vinegar.—**A.** In casks 3/0½ per cwt, in bottles 8/2; **Ar.** 45%; **B.** In casks 2½d per gallon, in bottles 3d; **Br.** Common 100 per litre, for preserving 1360 per kilo (in casks); **C.** Conserves in vinegar, sauces 35% a v; **D.** In casks 1·9½ per cwt, gross, in bottles 6½d per gallon; **F.** Import ½d per gallon, excise duty in addition, vinegar containing up to 8% of acetic acid 2½d per gallon, from 9% to 12% 3½d, from 13% to 16% 4½d, acetic acid and vinegar containing from 17% to 30% 8½d, from 31% to 40% 11d, more than 40% 1·11; **G.** In casks 4/0½ per cwt in flasks or bottles £1 4s 5d; **Gr.** Common 6/4½, other, in bottles £1 12s; **H.** Of two degrees strength or less, as ascertained by Dutch standard, scale B 2½d per gallon, other kinds 1·6½; **I.** Containing 10% or less of acetic acid 4·0·768, 10% to 50% 24/4·608, above 50%, 36/6·912; **Nic.** Per lb ½d; **N.** In casks containing up to 10% of acid 9/0½ per cwt, ditto over 10% ditto £4 10s 4d, in bottles containing up to 10% of acid 10½d per gallon, ditto over 10% ditto 8/1; **Nl.** 10% a v; **PR.** Per hecto 1 p 25 c; **P.** 218 r per decal; **R.** In casks 8½d per cwt, in bottles 16/4; **Rus.** In casks 10/10 per cwt gross,† in bottles 4½d† per bottle; **Sal.** Per lb acetic acid 3½d; **S.** 4/0½ per cwt; **Sn.** In casks containing up to 1% of acid 1½d per kilo, in other receptacles, without regard to acetic strength 1/1 per kilo; **Sz.** 1/10; **T.** 8% a v; **Ur.** 0·03 per litre; **USC.** Per kilo, vinegar in barrels 2½d.

Wagons.—See Carriages.

Wagon Covers.—See Woven Manufactures.

Wagon Grease.—See Grease.

Watches.—See Clocks and Watches.

White Lead.—See Lead and Lead Wares.

Wicks for Candles.—See Woven Manufactures.

Window Glass.—See Glass and Glass Wares.

Wire.—See Brass and Copper, Gold and Silver Wares, Iron and Steel, Zinc.

Wire Gauze.—See Iron and Steel.

Wire Ropes.—See Iron and Steel.

Woollen and Worsted, Yarns and Thread.—See Yarns (Woollen and Worsted).

Woollen and Worsted, Woven Manufactures.—See Woven Manufactures (Woollen and Worsted).

Woven Manufactures, Cotton, per cwt.—**A.** Cotton manufactures, pure or mixed with linen, (a) common, i.e. tissues for yarns No. 50 and under, (1) plain or simply twilled of 38 threads or less to 5 millimetres square, unbleached £1 12s 6d, bleached £2 0s 8d, dyed (except Turkey

Woven Manufactures—*continued*.

- red) £2 10s 10d, woven in many colours, printed or dyed Turkey red £3 0s 11d, (2) figured of 38 threads or less to 5 millimetres square, unbleached £2 0s 8d, bleached or dyed (except Turkey red) £2 10s 10d, woven in many colours, printed or dyed Turkey red £3 11s 1d, (3) close woven plain or figured of more than 38 threads to 5 millimetres square, unbleached £2 10s 10d, bleached or dyed (except Turkey red) £3 0s 11d, woven in many colours printed or dyed Turkey red £4 1s 3d, (b) fine, *i.e.* tissues from yarns over No. 50 and up to 100 inclusive plain or figured, unbleached, £3 11s 1d, bleached, coloured woven in many colours or printed £5 1s 7d, (c) finest, *i.e.* tissues from yarns over 100 plain or figured, also tulle bobbinet and pettinent (such as curtain stuffs and furniture covers) and tissues mixed with metal or glass threads £8 2s 6d, (d) lace and embroidered wares £10 3s 2d, (e) velvet or velvet-like tissues with or without cut pile, hosiery, haberdashery, &c. £4 1s 3d, (f) woven wicks, girths, hose, nets, &c. £1 4s 5d, (g) ready-made clothing, as material of which chiefly composed, with an addition of 40% ;
- Ar.** Ar. Paris laces and fine lace 40% a v, linens, bramants, angolas, tapes, tickings, 15% a v, sacking 5% a v ; **B.** Cotton tissues unbleached, plain, twilled and ticks, 1st class, weighing 20½ lbs or more to the 100 square yards of 35 threads and less to the 5 square millimetres £1 0s 4d, of 36 threads and above £1 9s 3d, 2nd class, weighing from 12 9-10th lbs to 20½ lbs to the 100 square yards of 35 threads and less to the 5 square millimetres £1 4s 5d, of 36 to 43 threads £2 0s 8d, of 44 threads and above £3 13 2d, 3rd class, weighing from 5½ to 12 9-10th lbs to the 100 square yards of 27 threads and less to the 5 square millimetres £1 12s 6d, of 28 to 35 threads £2 8s 9d, of 36 to 43 threads £3 17s 3d, of 44 threads and above, £6 1s 11d, cotton tissues, bleached 15% above the duty on unbleached, ditto dyed 10½ above the duty on unbleached, ditto printed 15% a v, cotton velvets, made as silk velvets, unbleached £1 14s 7d, dyed or printed £2 4s 8d, other kinds, cords, moleskins, &c., unbleached £1 4s 5d, dyed or printed £1 14s 7d, quiltings, dimities, stripes, checks, damasks and brilliants weighing 5½ lbs to the 100 square yards, 15% a v, clothing and other ready-made articles 10%, hosiery, haberdashery, tapes and ribbons 10%, lace made by hand and on bobbins, free, other lace and blonde 10%, all other tissues and wares, 10%, cotton tissues mixed with silk, if the cotton predominates in weight 10%, or at the option of the importer £6 1s 11d per cwt, ditto mixed with other materials, if the cotton predominates in weight 10% a v ; **Br.** Tarlatan, grenadine, if 100 sq. m. weigh 4 kilo or less 8'000 per kilo, above 4'000, velvets, velveteen, and bombazine 2'500, jaconnet, cambric, white and coloured '800 and 30%, calicoes, batiste, satinets, white, dyed, printed 1'200 and 30%, tulle, less 10'000, above 4'000, sail-cloth '625, floorcloth '900 per kilo, lace (Valenciennes) 10'000, all other 4'000 and 30%, shirts 3'000 to 13'600 per doz, veils 48% a v ; cotton flannels '300, bareges 2'000, cotton shawls or handkerchiefs '600, shirtings '620, hosiery '504 per doz ; **Ch.** Clothing 100 catties 1'5'0'0, ditto foreign free ; cotton piece goods, grey, white, plain, twilled, exceeding 34in wide and not exceeding 40yds long, per piece 0'0'8'0, over 34in wide and exceeding 24yds long, every 10yds 0'0'2'0, drills and jeans not exceeding 30in wide and 40yds long, per piece 0'1'0'0, not exceeding 30in wide and 30yds long, per piece 0'0'7'5, T-cloth, not exceeding 34in wide and 48yds long, per piece 0'0'8'0, not exceeding 34in wide and 24yds long, per piece 0'0'4'0, cotton, dyed, figured and plain, not exceeding 36in wide and 40yds long per piece 0'1'5'0, fancy white brocades and white spotted shirting 0'1'0'0, printed chintzes and furnitures, not exceeding 31in wide and 30yds long 0'0'7'0, cambrics not exceeding 46in wide and 24yds long 0'0'7'0, ditto 46in wide and 12yds long 0'0'3'5, muslins 46-24 0'0'7'5, 46-12 0'0'3'5, damasks 36-40 0'2'0'0, dimities or quiltings, 40-12 0'0'6'5, gingham 28-30 0'0'3'5, handkerchiefs, not exceeding 1yd square, per doz 0'0'2'5, fustians, not exceeding 35yds long, per piece 0'2'0'0, velveteens, not exceeding 34yds long 0'1'5'0 ; rags 0'0'4'5 per 100 catties ; **Cor.** 8% a v ; **D.** Cotton tissues, unbleached, containing less than 24 threads to the square half-inch, or weighing 7½ oz avoirdupois or above to 4½ square feet 4'8½ per cwt, other kinds 14'1, sail cloth and tarpaulin cloth weighing 7½ oz avoirdupois and above, per 4½ square feet, also druggeting (so far as such cloths

Woven Manufactures—continued.

are not included above) 14/1, marly, embroidery cloth, canvas, stiff nets and other open-woven gummed or stiffened wares, girths bands and tapes and fish nets £1 17s 8d, open and transparent tissues, combined or not with metal threads or spun glass, crochet, lace, fringes, trimmings and buttonmakers' wares £5 12s 11d, other kinds printed wares, knitted wares, hosiery and velvet stuffs £3 15s 3d, dyed in colours, not printed £2 16s 6d, of one colour, also damask, drills, &c., undyed £2 7s 1d, undyed plain tissues, also wadding £1 8s 3d, ready-made clothing when not lined or trimmed or when the lining or trimming is not liable to a higher duty than the material of which made, as the material of which chiefly composed, with an addition of 50%, when the lining or trimming is liable to a higher duty than the material of which made, as the material of which chiefly composed with an addition of 100%; E. Per kilo, raw 2½d, manufactured 1'0½;

E.
F.

F. Cotton tissues, plain, twilled and ticks, unbleached, 1st class, weighing 20½ lb to the 100 square yards of 30 threads and less to the 5 square millimetres £1 0s 4d, of 31 threads and above £1 9s 3d, 2nd class, weighing from 12 9-10th to 20½ lb to the 100 square yards of 35 threads and less to the 5 square millimetres £1 4s 5d, of 36 to 43 threads £2 0s 8d, of 44 threads and above £3 13s 2d, 3rd class, weighing from 9½ to 12 9-10th lbs to the 100 square yards of 27 threads and less to the 5 square millimetres £1 12s 6d, of 28 to 35 threads £2 7s 6d, of 36 to 43 threads £3 17s 3d, of 44 threads and above £4 18s 4d, 4th class, weighing from 5½ to 9½ lbs to the 100 square yards of 20 threads or less to the 5 square millimetres £2 4s 8d, of 21 to 27 threads £3 0s 2d, of 28 to 35 threads £3 18s 5d, of 36 to 43 threads £5 9s 9d, of 44 threads and above £8 3s 9d, 5th class, weighing less than 5½ lbs to the 100 square yards £10 19s 6d, tissues, bleached 15% above the duty on unbleached, ditto dyed 10½ per cwt above the duty on unbleached, tissues, printed, duties on unbleached tissues according to class, with the following additional duties, of 1 or 2 colours 1/4 per 100 square yards, of from 3 to 6 colours 2/8 ditto, of 7 colours or more 5s ditto, cotton velvets and fustians made as silk velvets, unbleached £2 6s 9d dyed or printed £2 16s 11d, other kinds, cords, moleskins, &c., unbleached £1 12s 6d, dyed or printed £2 2s 8d, woven fabrics composed wholly or in part of dyed threads pay as unbleached with an addition of 16/3 per cwt, brilliants or figured wares, unbleached, bleached or dyed pay as plain tissues according to class with 10% additional, piqués and counterpanes, quilted or reps, unbleached, weighing more than 33½ lbs to the 100 square yards £2 0s 8d, unbleached, weighing 33½ lbs and less to the 100 square yards £2 18s 11d, bleached, weighing more than 33½ lbs to the 100 square yards £2 6s 9d, bleached, weighing 33½ lbs and less to the 100 square yards £3 7s 9d, dyed, weighing more than 33½ lbs to the 100 square yards £2 10s 10d, dyed, weighing 33½ lbs and less to the 100 square yards £3 9s 1d, dimity, damask and table linen, unbleached £1 13s 4d, bleached £1 18s 4d, dyed £2 3s 6d, guipures for furniture, unbleached £2 8s 9d, bleached £2 16s 1d, dyed £2 18s 11d, counterpanes and blankets £1 2s 4d, hosiery of cotton, gloves £12 3s 10d, other kinds, cut out, but without seams £1 16s 7d, shaped or with the foot shaped £4 11s 5d, fringe-makers' wares £3 17s 3d, tapes and ribbons £2 0s 8d, bobbin net (tulle) coarse, less than 7 meshes to the square centimetre, £8 2s 7d, fine, 7 meshes or more to the square centimetre, £11 8s 5d, plumetis and fancy gauzes, lace and blonde, manufactured by machinery or by hand £8 2s 7d, curtains of muslin embroidered, not bordered, weighing less than 18½ lbs to the 100 square yards, £2 16s 10d, weighing 18½ lbs or more and curtains of muslin embroidered, bordered, of whatever weight to the 100 square yards, whether cut or in the piece £5 13s 9d, of tulle application or of grenadine or with tulle embroidered £13 4s 2d, muslins, embroidered or figured for furniture hangings or clothes and lappets, unbleached £3 13s 2d, bleached £4 4s 1d, embroidery, hand or machine made £9 2s 11d, wicks for lamps and plaited wicks for candles £1 4s 5d, oilcloth for packing 2/0½, for furniture or other similar uses 6/1, of moleskin leather 10½, mixed tissues of cotton and other materials, cotton predominating, piece goods of silk (or floss silk) and cotton £6 1s 11d, other piece goods £2 0s 8d, tapes or ribbons of cotton and wool £2 8s 9d, ditto of silk and cotton £6 1s 11d, other kinds pay as tissues of pure cotton, ready-made

Woven Manufactures—continued.

- clothing and articles wholly or partly made up, 10% above highest rate chargeable on material of which composed; G. Tissues of cotton, pure or mixed with metal threads but not with wool or silk, (1) fishing nets 1, 6½ per cwt, (2) very coarse textures made from unbleached yarn of cotton waste, in pieces not above 50 centimetres long, as grey packing cloth, press cloths, &c., also in combination with other weaving materials or with a few coloured threads 5½, (3) unbleached, close-woven wares, except velvet, also tulle, unbleached and unfigured £2 os 8d, (4) bleached, close-woven wares, dressed or not, except velvet £2 10s 10d, (5) velvet and all close-woven wares not included under 3, 4, and 9 £3 os 11d, (6) unbleached, open-woven wares (except curtains) not included under 3, hosiery, fringe and buttonmakers' wares, also tissues in combination with metal threads £3 os 11d, (7) curtain stuffs bleached and dressed £5 16s 10d, (8) all open-woven wares, such as jaconet, muslin, tulle, marly, gauze, so far as they are not included under Nos. 3, 6, 7, £5 1s 7d, (9) lace and embroidered wares £8 17s 10d, (10) ready-made clothing, under-linen £3 16s 2d, other kinds £7 12s 5d; Gr. Cotton tissues unbleached, not classified, containing in the warp and woof per 5-1,000th square metre, not exceeding 36 threads 6½d per 2·84 lbs, ditto 56 threads 7½d, bleached, not classified, 9½d, dyed and printed goods not classified, 11½d per 2·84 lbs, lamp wicks and boot laces £1 12s, tissues of fine make, transparent, viz, batistes, gauzes, muslins, grenadines, tulles, dentelles, head-kerchiefs (kalemkaria) and any embroidered goods (with the exception of ready-made clothes) £9 12s, velvet stuffs, garters, tapes, ribbons, laces, cords, edgings and haberdashery, lappets sancoulis (muslin), Spanish calicoes, pompadour and cretonne, calicoes exceeding 56 threads, underclothing, headbands (trembez) and remnants of cotton tissues 1½ per 2·48 lbs. sail cloth 6/5, ready-made clothes for men and boys are subject to the duty upon the tissue of which made with the addition of 40%, ready-made dresses for women and girls, without deduction for tare, and with or without embroidery or lace £24; Hl. Free; Hay. Per ell, cotton prohibited, manufactures, bleached or unbleached cloth from ½d to 1½d according to width, fine, under 30 in 2d, prints 1½d and 2d, drills and ducks, mixed linen and cotton, up to 30 in 3½d, ordinary 3d, pure cotton 2d, ordinary 1½d, denims, blue, from 1d to 1½d, according to width, pantaloons stuffs 2d, sheeting 5d, ribbons or tape, per dozen ells 1d, stockings, per dozen pairs 1·8, shawls, per dozen 4½, towels, coloured border, per dozen 1/8, common, per dozen 10d, table-cloth, per ell 4d; H. Manufactures of all kinds 5% a v. (NOTE.—Unbleached cloth to be printed or dyed in Holland, may be admitted free under special regulations.) I. Cotton tissues figured, embossed and damasked 8½ additional to duty on unfigured, brocaded 16½ additional to duty on tissues, embroidered in chainstitch £4 1s 3d per cwt additional, embroidered in lockstitch £6 1s 11d per cwt additional to duty on tissue, tulle, unbleached £8 2s 7d, bleached or dyed £9 2s 11d; unbleached tissues of cotton, with black bands in proximity to the selvage, £2 2s 4d; gauze and muslin, unbleached £4 1s 3d, bleached £4 17s 6d, dyed £4 15s 5d, printed £6 10s, figured 8½ additional to those not figured, brocaded 16½ additional to duty on tissue, embroidered in chainstitch £4 1s 3d additional to duty on tissue, embroidered in lockstitch £6 1s 11d additional to duty on tissue; oil tissues, oil cloth, &c., floor cloth, tarred tissues 12½, oil cloth £1 4s 4½d, emery cloth half duty on tissue without emery buttons £3 os 11½d; hosiery and knitted goods, plain £3 os 11½d, shaped £4 11s 5d; braids £3 os 11½d; curtains of tulle, anglais or torchon, hemmed with large cotton threads, £8 18s 1½d and 10% for sewing; galloons, tapes, and ribbons £2 8s 9½d; lace £14 4s 6½d; cotton velvets, common and plushes, unbleached £2 8s 9½d, bleached £2 16s 10½d, dyed £3 7s 0½d, printed £4 9s 4½d, fine—unbleached £2 16s 10½d, bleached £3 9s 1d, dyed £4 1s 3d, printed £5 1s 6d; mixed tissues, with less than 12% silk, according to quality of tissue with 16½ per cwt additional; with less than 50% silk, according to quality of tissue with 4/0½ additional, with metallic threads of gold, silver, gilt, or silvered, 2½ per cwt additional to duty on tissue; of common metal 9½d additional to duty on tissue; ready made articles, sacks, bed and table linen, towels, taped curtains, and the like according to quality of tissue with 10% additional; collars, cuffs, and men's shirts, twice the duty on their

Woven Manufactures—continued.

respective tissues; other articles 40% additional to duty on respective tissues; when the made up articles cannot be classed on the basis of weight to superficies and of the threads contained in a square of 5 millimetres, they are subject to the highest duty of the class to which they belong; in the case of mixed tissues, the duty on the tissue which predominates in weight or, when the weight of both tissues is equal, the duty of the most highly taxed material is payable; cotton tissues unbleached, weighing 13 kilogrammes and upwards per 100 square metres and having in warp and woof in the square of 5 millimetres 27 elementary threads or less £1 5s 2d, more than 27 threads £1 10s 1d, weighing from 7 to 13 kilogrammes per 100 square metres and having in warp and woof in the square of 5 millimetres 27 elementary threads or less £1 17s 1½d, more than 27 threads £2 0s 8d, weighing less than 7 kilogrammes per 100 square metres and having in warp and woof in the square of 5 millimetres 27 elementary threads or less £2 4s 8½d, more than 27 threads £2 12s 6d, bleached 20% above the duty on unbleached, dyed or woven in colours 14/3 above the duty on unbleached, printed, £1 10s 6d above the duty on unbleached, small shawls of carded wool mixed with silk £6, 3% extra if sewn hems, small cotton shawls having the hems worked with woollen threads £3 1s 4d and 40% for sewing, of woollen net with fringe of wool and silk 8.8½ per kilo and 30% for sewing, of black wool, embroidered with silk on one corner only with a woollen fringe, £4 28s 1½d and 25%; M. Per kilo, cotton tissues, articles of cotton fabric of all kinds, not embroidered and not otherwise distinguished 1'60 (l w), ditto embroidered with any material other than silver or gold 2'25, cotton lace and netting of all kinds, and all manufactures of these materials, even though ornamented with silk or any metal other than silver or gold 6'00, ruching of cotton muslin, with or without cotton lace and small silk ornaments 4'30, cotton yarn of all kinds and colours (n w) 0'90, cotton thread of all kinds and colours, including the cotton thread called "crochet" (l w) 1'20, shawl handkerchiefs or shawls, large or small, of cotton of all kinds other than net, with or without fringe or embroidery of cotton or wool (n w) 1'20, ditto, with or without embroidery of wool or cotton, and with fringe of silk and wool or silk and cotton (n w) 2'50, elastic web of cotton and indiarubber more than 4 centimetres wide (g w) 0'60, clothing of cotton stuff ready cut in pieces for dressings of all kinds, except that elsewhere specified (n w) 1'70, cotton tissues, unbleached or white of all kinds, plain, not exceeding 30 threads in a half-centimetre square 0'90 sq m, ditto of more than 30 threads 0'11, ditto, printed, dyed or stamped, of all kinds not exceeding 30 threads, &c. 0'12, ditto, exceeding 30 threads 0'15;

M.

Nic.

Nic. Per lb. raw, with seeds ¼d, without seeds 1¼d, sewing thread, hand or machine, white or coloured 7d, cotton in skeins, raw or white 3d, ditto any other colour 4½d, table linen, worked, damask, table cloths, serviettes and other damask tissues 7½d, mats, towels, counterpanes quilted and other quilted tissue 7½d, white cambric (coquillo), madapolan and similar bleached tissue 6d, flowered calico, plain or worked of any colour 10d, shirts, shirt fronts, collars, cuffs, drawers, blouses, vests and similar articles, white or coloured, plain or worked, for men or women's wear 1/0½, ditto with or without collars, cuffs and fronts of linen 1/5½, waistcoats, stockings, socks, night-caps, gloves, drawers knitted, and any manufacture or tissue embroidered 10d, canvas 6½d, ribbons, laces for shoes, plain or worked 7½d, corsets, finished or not 1/7, creas, petticoats or gingham, white 9d, ticken, quilted, satinette, light stuffs for men's clothes 7½d, lace curtains and coverlets, lace or knitted tissues 2/1, counterpanes or horse-rugs and ponchos 6d, waistbands, braces and garters 1/5½, fringes, ornaments, galloons, plain or worked, tufts, cords, &c. 1/5½, gauze, muslin, printed, open-worked or embroidered, muslins for beds or curtains 1/0½, ditto plain or figured, white 11d, mantles (mantua), plain, unbleached, of any kind and size 3½d, bed ticking, unbleached or bleached, ticking, blue, coffee, or other colour, and sail-cloth 4½d, wicks for lamps 9d, ditto for candles 2½d, cloths, lawn, transparent tissues, cambric and other tissues 10d, small wares not distinguished 2/1, lace, tulle, crape, white or coloured, plain 2/1, plush or satin, of cotton 1/5½, pocket-handkerchiefs and neckerchiefs, flowered calico, satinette, lawn, jaconas, chintz, white calico, imitating serge or embroidered 1/0½,

Woven Manufactures—continued.

- cambric muslin, plain or worked and quilted for ladies' wear 9d, satin, satinette, and poplin for ladies' wear 1'0½, rebozos 1/3, rebozos trimmed with silk 2/1, sandaline, lustring, Hollands and other stuffs for lining clothes 7½d, carpet bags, bags, hammocks, and similar articles 7½d, cloth for ladies wear and estopillas, printed 11½d, cloth for bed-coverings, bleached or unbleached 6½d, neckerchiefs, embroidered 3'9, galloons and ornaments of any kind 1/5½, chintzes and jaconas, of tissues plain or worked, common, semi-fine, or fine of any quality 9d; N. Manufactures of pure cotton, sail cloth and other unbleached and undyed cloth weighing 6'3 oz to 2'7 square feet 3/11½, cloth bleached printed, dyed or woven of dyed yarn weighing 3'5 oz to 2'7 square feet 15/3, ribbons or tapes, also ribbons and tissues mixed with indiarubber or gutta percha and waistbands of the same £3 2s 1d, drill and damask also handkerchiefs not otherwise specified £1 13s 11d, knitted wares, dyed or not £3 2s 1d other cotton tissues, blonde, bobbinet, lace and tulle £7 1s 2d, other open or transparent tissues £4 19s 4d, close-woven printed £3 2s 1d, ditto dyed, of various colours, not printed £1 9s 11d, ditto of one colour, even if applied by printing or rolling, also bleached 15/3, ditto unbleached 7'4, trimmings, buttons, fringes, &c. £3 16s 3d, ready-made clothing as the predominating material of which made with an addition of 10%.
- (NOTE.—Manufactures of cotton mixed with flax, hemp or other vegetable fibres pay as cottons, and those of cotton mixed with silk, or of cotton mixed with wool, as manufactures of silk and wool respectively.) Per. Cotton 40%, manufactures of, 40% a v; PR. Per kilo, textiles, closely woven, smooth, brown, white or coloured, as madapollams, calico, croydon, domestics, and like goods up to 10 threads 14 cts, from 11 to 16 threads 20 cts, 17 to 21 threads 27 cts, 22 threads and upwards 43 cts, textiles, closely woven, smooth, printed, as regencies, chintz, and similar goods, up to 13 threads 23 cts, 14 to 17 threads 29 cts, 18 to 21 threads 49 cts, 22 threads and upwards 75 cts, textiles, transparent or light, smooth, plain or worked, white, coloured or printed, as muslin gauze, lawn, jaconet, organdies, poplins, victorias, cambrics and like goods, up to 12 threads 34 cts, 13 to 17 threads 43 cts, 18 to 23 threads 58 cts, 24 threads and upwards 95 cts, textiles, twilled, white, brown or coloured, as bed ticking, canvas, domestics, madapollams, towelling, and like goods 20 cts, textiles, twilled, superior to the preceding, and those printed, flowered, as germanic, drills, pique, damask, and like goods 56 cts, quiltings, blankets and muletouls 17 cts, corduroys, velveteens, and other double textiles for articles of dress 75 cts, tulles, edging, and lace crochet 1 peso 45 cts, textiles knitted into undershirts, stockings, drawers, gloves, caps, and other forms 63 cts; P. Per kilo, cotton, raw 230 r, thread, single, raw, fine red or stamped with more than one colour 190 r, thread, white, single 235 r, ditto, coloured, single, not otherwise mentioned 270 r, ditto, twisted 370 r, lace and insertions 1,665 r, marly, tulle, ordinary canvas, crinoline, &c. 170 r, fine muslins, &c. 1,180 r, muslins and cambrics, unprepared 235 r, white muslins and cambrics, not otherwise mentioned 900 r, linseys, blankets, and moleskins 600 r, twills for printing or dyeing 220 r, canvas and sailcloth for vessels 70 r, ditto, not otherwise mentioned, sackcloth and Holland, grey or bleached 120 r, tissues, close-woven, plain, not elsewhere classified, grey 160 r, ditto, bleached 185 r, serges, damasks, sateens, transparent, grey, or bleached, not otherwise classified 330 r, ditto, transparent, dyed, or stamped, not otherwise mentioned 535 r, velveteens and bombazines 280 r, velvets, velvety stuffs and ribbons 600 r, shawls and handkerchiefs 649 r, carpets, druggets, and stair-carpets 260 r, candle-wicks 150 r, wicks not classified 570 r, knitted tissues and stuffs and stockings 1'095 r, trimmings, galloons, bobbin work (including the tares, excepting boxes) 760 r; R. Common, viz., tissues not bleached, dyed, dressed or figured, woven wicks, nets and girths 8'2, middle-fine, viz., tissues, bleached, dressed, dyed (except printed), figured or not 10'2, fine, viz., printed, also velvety tissues 18'3, extra fine, viz., English tulle, bobbinet, muslin, lawn, gauze and other open-woven wares (except lace) £1 16s 7d, haberdashery and fringemakers' wares £1 12s 6d, hosiery of cotton, plain or trimmed with other tissues £1 12s 6d, lace 5% a v, clothing made up or not from £3 13s 2d to £20 according to sections of Tariff Act under which its composition falls; Rus. Tissues, unbleached, bleached, figured or dyed (except those dyed Turkey red):—

Woven Manufactures—continued.

Up to 8 square arshines† to the funt*	£6	2	2	per cwt*	•
From 8 to 12 " "	8	5	6	"	•
" 12 to 16 " "	10	16	9	"	•
Of more than 16 " "	23	12	11	"	•
Tissues, printed or dyed Turkey red :—					
Up to 8 square arshines† to the funt	£10	16	9		•
From 8 to 12 " "	13	0	1	"	•
" 12 to 16 " "	16	7	1	"	•
Of more than 16 " "	26	0	2	"	•

Cotton tissues of every kind with applications of gold, silver tinsel, straw or other ornaments and if cut out for ladies' dresses £26 os 2d,⁴ velvet, plush and plush ribbons £9 17s, haberdashery (galloon or braid), hosiery, knitted wares, chenille and articles thereof and canvas with or without embroidery commenced on it £7 17s 8d,⁶ buttons £6 10s 1d,† tulle (net) of every kind for furniture with or without designs and net or muslin curtains £8 17s 4d,† all other cotton tulle £43 7s, lace £65 os 5d,† waxed and oil-cloth and manufactures thereof £2 7s 3d,† ready-made clothing (1) made-up linen of all kinds, including underlinen, but exclusive of tablelinen, towels and handkerchiefs and those coming under article 2 £35 7s 9d,† (2) made of lawn and batiste and all kinds trimmed with lace or embroidered £47 3s 8d,† (3) ready-made clothes for men £30 9s 6d,† (4) clothing for women and articles of all kinds not otherwise specified, untrimmed £53 1s 8d,† (5) the same trimmed with ribbon, velvet, silk, feathers, fur, embroidery and lace £82 11s 5d.†

(NOTE.—Caparisons, coverlets, curtains, blinds and similar articles, hemmed and stitched pay duty as materials of which they are made.) Thread of silk and cotton per pound £3 7s 6d ;

Sal. Raw, not rated, antimacassars, 30in long, per doz 12/4, arabias, 36in, per yd 4½d, artificial flowers, per lb 15/5½, badanas, 36in wide, per yd 3d, bands, per doz pairs 9½d, cloths, 45in long, per doz 6/3, white and cambric, 28in, per yd 1½d, ditto, 32in ditto 2½d, ditto 40in ditto 3d, canvas, 30in wide, ditto 1½d, carpeting, per square piece 1½d, costumes 6/3 each, ditto, not made up, ditto 4d, ditto and for children, ditto 4/8, cuffs, shirt, per doz pairs 4/4½, drill, 32in, per yd 3½d, ditto, linen mixed with cotton, 32in, ditto 5½d, ditto ditto, fine, 32in, ditto 11½d, drawers, per doz 12/4, dimity, 32in, per yd 6½d, ditto, quilted ditto 1/3, damask, 28in width, ditto 5½d, ditto, mixed with wool, ditto 1/1, embroidery, per lb 4/8, frock coats, each 7/9½, jackets, ditto 4/8, garters, per doz 2/2, ditto, children's, ditto 1/6½, gauze, per yd 3½d, holland, mixed with linen, 36in width, ditto 9½d, handkerchiefs, 18in, per doz 11d, 28in 1/6½, 36in 2/4, lawn, 40in width, per yd 4½d, bordered with wool or silk, ditto 5½d, lace, 36in width, ditto 4½d, bordered, &c., ditto 6d, muslins, 28in width, ditto 2½d, 36in 3d, mixed with wool 6d, padding, per lb 9½d, packing cloth, linen mixed with cotton, 36in, per yd 2½d, prints, 24in, ditto 1½d, 36in, ditto 3d, shirtings, 26in, ditto 1½d, 30in, ditto 2½d, 36in, ditto 2½d, drill, 36in, ditto 3d, shawls, lace, per doz £1 17s 0½d, small size, ditto £1 4s 8d, ordinary, each 6/3, china silk, per doz 1/6½, ditto large, ditto 15/5½, china crape, each 4/8, sashes, &c, per doz 4/8, sashes mixed with wool, ditto 4/8, skirts, ditto £1 17s 0½d, sailcloth, per yd 9½d, surplises, each 12/4, socks, men's, per doz 3/1½, children's 1/6½, mixed with wool 2/6, stockings, per doz, sewn 5/5½, unsewn and women's 9/4½, sewn 3/1½, children's 1/6½, shirts, per doz 15/5½, ditto, with linen collars and cuffs, ditto £1 4s 8d, scarves, ditto £2 15 6½d, tassels, per lb 2/3½, undershirts, per doz 9/4½, ditto, mixed with wool, ditto 13s 10½d, vests, ditto £9 17s 0½d, white spreads, 2 yds, each 1/6½, 3 yds 3/1½, wraps, per lb 6/3, wrapper, each 16/7½ ;

8. Close-woven tissues, plain, unbleached, bleached or dyed in pieces or handkerchiefs, measuring up to 25 threads inclusive in the square of 6 millimetres £3 2s 10d, of 26 threads and above £3 10s 11d, close-woven tissues, printed, twilled or figured in the loom up to 25 threads inclusive £4 17s 8d, of 26 threads and above £5 1s 2d, open-woven tissues, as muslins, batiste, lawns, organdines and gauzes, all kinds £4 11s 0d, quiltings and piqués £4 5s 4d, corduroys, velveteens or other double textures for wearing apparel £5 os 7d, net or tulle £8 9s 10d, lace, crochet of all kinds, including crotchet edgings £4 15s 6d, lace other than crochet £10 19s 6d, knitted wares in pieces,

* = 409·5 grammes ; 1 English lb = 453·5 grammes.

† Arshine = 0·71 metre.

Woven Manufactures—continued.

- shirts or drawers £3 10s 5d, ditto stockings, gloves, &c. £5 3s 2d, fringes, galloons, &c. £4 1s 3d, ready-made clothing, as material of which made with an addition of 30%, embroidered articles ditto, mixed tissues (1) tissues of cotton mixed with silk or wool—see silk tissues mixed and woollen tissues mixed respectively, (2) tissues of cotton mixed with linen as pure linen tissues, (3) tulle of cotton foundation, although embroidered with silk or other material will pay duty as cotton tulle, when there is a mixture in the foundation
- Sn.** duty will be payable on the predominating material; **Sn.** Tissues of pure cotton, sailcloth 7'11, bookbinders' cloth £1 8s 3d, velveteen, plush and fustians £2 10s 10d, gauze, muslin and other similar open-woven wares, also close-woven wares containing at least 80 threads in the space of 1 square centimetre £4 18s 10d, tulle £7 1s 2d, other kinds not bleached or dyed £1 8s 3d, bleached or dyed £2 10s 10d, printed or stamped £3 2s 1d, ribbons and tapes £3 2s 1d, blinds, painted or printed £2 10s 10d, lace and blonde £6 12s 8d, fringes, galloons, cords, cording, &c. £3 2s 1d, hosiery, gloves, stockings, &c. £3 6s 7d, ready-made clothing, sheets, towels, &c., hemmed or with needlework as material of which made with an addition of 20%, embroidered articles as material upon which embroidered with an addition of 20%; **Sz.** Tissues, plain, twilled, bleached, dyed, printed 14'2'69, quilted, figured, dimity, damask, brilliants, figured 6/6, velveteen, figured 20/4, blankets, without needlework or trimming, unbleached, also ditto bleached, of dyed yarn, dyed, printed 1'7'5, blankets with needlework or trimming £1 0s 4d, blankets of cotton waste 3s and £1 7s 8½d respectively, felt tissues, not finished, for paper making 16/3'08, ribbons and haberdashery, also hosiery £1 0s 4d, embroidery and lace £2 0s 8d, clothing, underclothing, and other articles ready-made with needlework £1 8s 6d; pads of stuff for caulking of ships, impregnated or not 1/2½, gun cotton for manufacture of collodion 15/10, sleeves of plush (cotton, wool, jute, &c.) £2 10s 4½d; **T.** All kinds 8½ a v; **USC.** Per kilo, unbleached cloth, without any white or coloured part, and without figures or sewing 1/8, blue fulas or white cloth, or unbleached, with white parts, smooth, without colouring, figures, sewing or embroidery, as bogotanas, calicots, liencillos, madapolanes, croydons and others of the same kind 2/1, drills and other white and coloured fabrics not otherwise mentioned 2.6, coverlets, Marseilles and figured, and damasked fabrics not comprised in other groups, and velveteen, tape and ribbons 2/11, ordinary handkerchiefs, with or without borders, shawls and mauds, and fabrics for making same 3/4, socks and other textiles, commonly called tricot materials, as undershirts, drawers and gloves, muslins, lawns, and other transparent fabrics, damasks, carpets, hammocks, and ready-made clothing, without embroidery, laces, or other ornaments of articles subject to higher duties 3/9, all kinds of embroidered fabrics, or meshed, and their imitations, inclusive, laces, insertions, and other similar and ready-made clothing, not otherwise mentioned 5/, fringes, galloons, cords, braids, tassels and like objects 3/9, wicks for lamps and tinder boxes 10d, wicks and twisted cotton for bugies, candles, or matches 5d, cords for bridle reins 10d, mixed
- Ven.** fabrics pay same rate as highest materials contained; **Ven.** 2nd class, boat sails; 3rd class, cordage, blue hollands; 4th class, heavy bands, bruzas, canvas, duck, twine, mats (1 metre long, 50 centimetres wide), furniture cloths, sails for vessels, lamp wicks, chair bottoms; 5th class, arabias, white Britannia, brown cotton, unbleached onaburgs, regatta stripes (brown), cotonia (for cots), domestic (unbleached), drill (unbleached), elephants, linings, white blankets, gingham, embroidery or knitting white hollands, brown Irish cottons, unbleached drillings (white or coloured), coarse gingham, bleached shirting, wide shirting, silesia (white or coloured) white shirting, savajo (croydons), simpatico (shirting); 6th class, German cloth (white or coloured), knit undershirts, knit bands, gowns, (made or cut), knit caps, bombazine (white or coloured), bordon (white or coloured), coloured brilliantine, hammock cords, socks, stockings, calicones (coloured), knit drawers and pants, calicones, table-covers, bed-spreads, coqui (white or coloured), regatta stripes (bleached or coloured), cretonas, hammocks, malvinas (coloured), cloaks coverings, damask (white or coloured), undershirts, estripe, fustians (made or cut), razete (white or coloured), bed quilts, parasols, knit work, cloth for undershirts (embroidered or not), chemisettes (made

Woven Manufactures—continued.

of cut), table-cloths, nainsook, candle wick, towels, d'oyleys, handkerchiefs, umbrellas, coloured percales, piqué (white or coloured), bustles, poplins, white cottons, coloured calicoes, wadding; 7th class, fine bands, barge, portmonnaies, blondas, borlas, all cotton shirts, children's shirts (cut), crochet covers, zephyr (white or coloured), girths, ribbons, gauze (white or coloured), hangings, curtains, cravats, cord, corsets, jackets, creapo (coloured), shawls, grenadines (white or coloured), gloves, holan-batista, victoria lawns, garters, insertions, laces, fringes, galloons, pillow slips, mosquito netting, velveteen, muslins and organdies (white or coloured), scarfs, passementerie, tulle crochet work, renque and tarletan (white or coloured), strings and suspenders; 8th class, blouses, linen-bosom shirts, overcoats, children's shirts, capes, collars, petticoats, dotted shawls, holan-batista or gauze (made into ruffs, ruches, caps, or other adornments), lazos, tulle (made up), cuffs, men's ready-made clothes, ruches (fine), tafita, mantillas, pants, drawers, shirt fronts, children's fine shirts; 9th class, caps, dresses, women's ready-made clothing

Woven Manufactures (Linen, Hempen and Jute), per cwt.—**A.** Tissues of flax, hemp, jute or other vegetable fibre, with the exception of cotton, without admixture of silk, wool or other animal hair (a) grey packing cloth, *i.e.*, coarse unbleached, plain or simply twilled but not figured stuffs, of linen or hemp, which contain not more than 5 warp threads per 5 millimetres 2/0½, (b) common linen wares (1) cloth of not more than 20 warp threads per 5 millimetres, not bleached and not figured 12½, (2) bleached, dyed, woven in colours or printed, having per 5 millimetres up to 10 warp threads £1 os 4d, from 11 to 20 warp threads £2 os 8d, (3) figured, having up to 20 warp threads per 5 millimetres £2 os 8d, (c) fine linen wares, *i.e.*, having more than 20 warp threads per 5 millimetres, unbleached, bleached, dyed, woven in colours, printed or figured £4 1s 3d, (d) batiste, gauze, lawn and other open-woven tissues £6 1s 11d, (e) tissues mixed with metal threads £8 2s 6d, (f) lace, edgings and embroidered tissues £15 4s 11d, velvety tissues £4 1s 3d, (g) jute tissues (1) sackings and packing cloth not exceeding 5 warp threads per 5 millimetres, raw, unbleached, undyed unfigured, plain or simply twilled, also ready-made sacks of such cloth 6/1, (2) rugs and wagon covers, matting of jute or other vegetable fibres not otherwise specified, bleached, dyed, printed, figured or not 12½, (3) tissues for furniture covers and wearing apparel, carpets and all tissues of jute in combination with other vegetable textile materials, including cotton, provided that the jute threads exceed in number, plain or embroidered, combined or not with metal threads £2 os 8d, (h) haberdashery, hosiery, &c., also velvety tissues, cut or uncut pile £4 1s 3d, (i) ready-made clothing, as material of which chiefly composed, with an addition of 40%, (j) oil or waxed cloth (1) coarse, unprinted for packing, &c. 6/1, (2) tarpaulins and floorcloth £1 os 4d, (3) other kinds, including waxed muslin £1 10s 6d; **Ar.** Linen manufactures for packing purposes

B. 5% a v; ready-made clothings and hats 50% a v; **B.** Tissues of all kinds of linen, hemp or jute, sailcloth free, lace made by hand and on bobbins free, all other kinds 10% a v, ready-made clothing, hosiery, haberdashery, trimmings, &c. 10%; **Br.** Sailcloth 500 per kilo, lace (Valenciennes) 25'000 and 30%, others 10'000, collars 2'100, ruffles 1'800 doz pair and 30%, sacks and bags 350 per kilo, tablecloths embroidered 48% a v, other 2'000 and 30%, rags 0'20, tents of sailcloth, 48%, **C.** Linen sheets, socks and stockings, tablecloths 35% a v, rough, not bleached, sailcloth, bags, empty 15% a v;

Ch. Linen, fine, as Irish or Scotch, not exceeding 50 yards long, per piece 0'5'0'0, coarse, as linen and cotton, or silk and linen mixtures not exceeding 50 yards long, per piece 0'2'0'0, sailcloth, not exceeding 50 yards long, per piece 0'4'0'0, mats of all kinds per hundred 0'2'0'0, matting, roll of 40 yards 0'2'0'0, jute 100 catties 0'2'0'0; **Cor.** Flax, hemp and jute 5%, manufactures 7½%; **D.** Linen hempen and jute tissues, unbleached, containing less than 24 threads to the square ½ inch, or weighing 7½ ozs avoirdupois or above to 4½ square feet 4/8½, other kinds 14/1, sailcloth, tarpaulin cloth, weighing 7½ oz. avoirdupois and above to 4½ square feet, also drug-getting (so far as such cloths are not included above) 14/1, marly, embroidery cloth, canvas, stiff nets and other open, gummed or stiffened wares, girths, bands and tapes, fish nets, also lamp wicks £1 17s 8d, open and transparent tissues, combined or not with metal

Woven Manufactures—continued.

- dyed plain 14/2½ additional to duty on unbleached plain, ditto, ditto, figured and damasked 8/1½ additional to duty on coloured or dyed plain, printed plain 32/6 additional to duty on bleached plain, ditto figured and damasked 8/1½ additional to duty on printed plain, embroidered with chain stitch £4 1s 3d additional to duty on tissue of which composed, with lock stitch, £6 1s 11d additional to duty of which composed, floor-cloths, tarpaulins, &c., tarred, oiled, &c. 12/2½, ditto waxed 24/4½, braids £2 12s 10d, hosiery and knitted goods plain £2 12s 10d, shaped (*foggiale*) £3 19s 3d, buttons, galloon and tapes of flax and hemp £2 12s 10d, lace and tulle 2/6½ per lb, tissues of flax, hemp, and jute mixed with metallic threads of gold, silver gilt or silvered 1/9½ per lb additional to duty on material of which composed, of common metal 8½d per lb additional ditto, ready-made articles, sacks, bed and table linen, towels, &c., 10% extra to duty on material of which composed, collars, cuffs, and men's shirts twice duty on material of which composed, all other 40% extra duty on material of which composed; J. Linen all qualities 20 cents per 10 yards; M. Carpets and rugs solely of hemp, of tow, or any other unspecified vegetable fibre, plain, crossed, figured or with uncut pile 0·25 sq m, ditto with cut pile 0·35, shirts and nightshirts, not embroidered, of all kinds, sizes and colours n w 3·80 per kilo, ditto embroidered n w 7·00, linen lace and netting of every kind, and all manufactures, even though ornamented with silk or with metal other than gold or silver l w 9·00, thread of unbleached or coloured hemp, fine or common, including that half twisted, of all sizes, in balls or skeins l w 0·13, thread of linen or hemp, white or coloured, on reels, including glacé thread for rebozos 2·00, linen shirt fronts, plain or embroidered n w 6·00, elastic web of linen or hemp, more than 4 centimetres wide, g w 0·70, clothing of linen stuff, cut out in pieces, for dresses in all kinds, not otherwise distinguished n w 1·90, tissues of linen or hemp, unbleached, white or coloured, of all kinds, not plain 0·22 sq m; Nic. Per lb, thread for sewing and embroidery 7½d, table linen, figured, tissue with coloured squares, damask table cloths, serviettes, and other damask tissues 10d, Brittany cloth, Irish linen, estopille, lining cloths, creas, white 1/3, courtrai, Osnabruck, and Hollands, unbleached or coloured 10d, military cloth 1/0½, pocket handkerchiefs, neckerchiefs, scarves, white or plain, figured or embroidered 2/1, cambric 2/1, cloth for bed coverings 1/0½, shirts, fronts for shirts, collars, cuffs, plain or embroidered 2/1, lace, blondes, embroideries and ornaments of any kind for women's wearing apparel 3/9, women's wearing apparel, ready made or in separate parts, plain or figured 3/1½. (NOTE.—Articles of linen mixed with cotton pay duty as articles of linen.) Tow or hemp, not worked 1d, cordage of any kind 1½d, hemp, common, in lump, skeins, or prepared for sewing 5d, cables or ship's tackle 2½d, ticken, unbleached or bleached 10d, sailcloth 6d, sacks, common or for wheat 1d tissues of hemp or sailcloth 7½d, hats of Indian hemp or Panama hats 6/3; N. Manufactures of linen, hemp, or jute, fishing nets, as the material of which made, with an addition of 10%, engine hose free, horse and furniture girths 7/4, carpets and carpeting 15/3, tapes and ribbons, also ribbons or tissues mixed with indiarubber or gutta percha, and waistbands of the same £3 2s 1d, drill and damask, also handkerchiefs not otherwise specified £1 13s 11d, knitted wares, dyed or not £3 2s 1d, other tissues, close woven bleached, weighing 3·9 ounce to 2·7 feet square 3/11½, other kinds unbleached 3/11½, bleached, or of one colour, even if applied by printing or rolling 15/3, dyed, of several colours, not printed £1 9s 11d, printed £3 2s 1d, open or transparent, blonde, bobbinet, lace, and tulle £7 1s 2d, other kinds £4 19s 4d, trimmings, buttons, fringes, &c., £3 16s 3d, floorcloth, matting, tarpaulin, and other cloth, weighing 470 grammes or more to the half metre square 7/4, oilcloth £1 17s 10d, ready-made clothing as the material of which made, with an addition of 10%. (NOTE.—Manufactures of flax, hemp, or jute, mixed with cotton, pay as cottons.) Per. Manufactures 10%; PR. Per kilo, textiles, raw, with or without coloured stripes, smooth, plain, or crossed, as packcloths, hessian, sacks, and like goods, up to 5 threads 6 cts, smooth, plain, raw, as nankeen bramante, sailcloth, Osnaburg, duck, Irish linen, striped, and the like, up to 10 threads 20 cts, 11 to 15 threads 22 cts, 16 to 20 threads 65 cts, 21 threads and upwards 1 peso 23 cts. (NOTE.—The four preceding items, printed, pay the corresponding duty on the thread

Woven Manufactures—continued.

- which they have, plus 20%.) Twill, raw or crude, coloured, with or without coloured stripes, as bed ticking and crude drills 30 cts, twill white, printed or dyed, damasked or flowered, as damask, drills, towels, and like goods 49 cts, laces and edgings of all kinds 4 pesos 60 cts, hosiery 1 peso 15 cts, carpets 7 cts, shoes or sandals (alpargatas) 14 cts, oilcloth for tables and floors, and for packing, per 100 kilos, 10 pesos 35 cts, other, per kilo, 25 cts; P. Marly and canvas for samples £1 14s 4d per cwt, lace, insertions, tulle, bobinet, &c, £17 3s, coarse cloths, Hessians sacking and packing cloth £2 1s 2d, Holland £3 8s 7d, damasks and drills £8 18s 4d, sailcloth 13 8, tissues not otherwise specified £6 17s 2d, tapes and ribbons £6 17s 2d, shawls and handkerchiefs £5 14s 4d, carpetings £2 5s 9d, hosiery and knitted wares £11 8s 8d, haberdashery, galloons, and fringes £8 0s 1d, waterproof tarred tissues 4 6½, oilcloth for floors 14 10, other oiled cloths £5 14s 4d, ready-made clothing as tissues of which made with addition of 50%, linen tissues mixed with silk or gold or silver 20% extra; R. Tissues knitted and woven wares of flax, hemp, jute, and other vegetable fibres, jute tissues, very common, unbleached or bleached, also carpets of pure jute 2 0½, unbleached cloth, very common 4 0½, unbleached cloth, close woven and thick, twills for bedding and furniture, bleached or not, cloth woven in colours (striped or checked canvas), unbleached ticks 12 2, plain unbleached cloth not included above 18 3, ticks of all kinds, unbleached, bleached, or woven in colours £2 0s 10d, plain linen cloth (holland) of all kinds, unbleached or dyed £3 1s, plain linen cloth (holland) of all kinds bleached £3 5s 1d, plain linen cloth (holland) of all kinds, printed, handkerchiefs with printed designs, in dozens, hemmed or not, table and toilet linen, unbleached or bleached, figured or damasked £5 1s 7d, batiste and lawn, handkerchiefs of the same in dozens, embroidered or not, but without lace £20, knitted wares of all kinds £9 3s 9d, haberdashery fringe-makers' wares and tapes unbleached, bleached or dyed £6 2s 6d, tulle and lace £28, tissues of other vegetable fibres unbleached, bleached or dyed 16 4, carpets of linen or hemp £2 9s, oil and wax cloths of all kinds, also tarred packing cloth £1 0s 5d, clothing made up or not, composed of tissues of linen or hemp from 4/1 to £60 10s according to certain restrictions (as to composition, admixture with other materials, &c.) in the Tariff Acts, underclothing made up or not, according to the sections under which it falls in the Tariff Act, from
- Rus.** £3 13s 2d to £42; **Rus.** Linen cloths not otherwise specified, bleached and unbleached, of flax and hemp of all kinds, with or without admixture of cotton £16 14s 3d,† and batiste and lawn of pure flax or hemp or mixed with cotton, not dyed nor printed £35 7s 9d,† the same dyed, printed, or woven of different colours, also batiste and linen pocket handkerchiefs, as the material of which made with an addition of 20%, handkerchiefs marked, embroidered, or bordered with lace £47 3s 8d,† flax or hemp tissues, twilled or with woven patterns, with or without admixture of cotton, such as table linen and towels of all kinds £16 14s 3d,† drills of all kinds £11 15s 11d,† sailcloth £3 18s 8d, ticking for bedding and furniture, carpet textures of flax, hemp, jute, &c., and similar stout flax and hempen tissues, with or without admixture of cotton £9 16s 7d,† waxed and oilcloth and manufacture thereof, also canvas prepared for painting £2 18s 11d,† hempen hose for fire engines, hempen buckets and tarpaulin £2 18s 11d, linen and hemp hosiery not otherwise specified £12 5s 7d,† galloons, trimmings, &c., not otherwise specified £8 16s 11d,* buttons £11 15s 11d, lace, handmade £129 15s 1d, machine made of all kinds £68 16s 2d,† tulle for furniture, with patterns woven in or embroidered, and curtains of net or muslin £29 9s 10d, tulle or net, other kinds, plain or figured, for ladies' dresses £43 6s 11d,†
- Sal.** ready-made clothing (see Woven Manufactures—Cotton); **Sal.** Per yard, common drill, mixed with cotton 5½d, fine ditto, ditto 11½d, canvas 1½d; **S.** Tissues of linen or hemp, plain, up to 10 warp threads inclusive in the square of 6 millimetres £1 15s 4d, ditto from 11 to 24 warp threads inclusive £4 7s 4d; ditto of 25 warp threads and above £7 16s 6d, tissues of linen or hemp, twilled or figured £3 14s 4d, plain tissues of jute with or without admixture of cotton 18 3, tissues of jute, twilled or figured, with or without admixture of cotton £1 16s, lace £25 8s, knitted wares £9 6s 2d, oil, cloth and waxed cloth for floors and for packing 8 10 oilcloth, other kinds £1 6s 5d, fringes, galloons, cordings, &c. £4 1s 3d, ready-

Woven Manufactures—continued.

made clothing as material of which made with an addition of 30%, embroidered articles ditto, mixed tissues, (1) tissues of linen and cotton as pure linen tissues, (2) tissues of linen mixed with silk or wool, see silk tissues, mixed, and woollen tissues, mixed, respectively ;

8a. 8a. Linen and hemp, tissues, plain or twilled, except satens and "azines, without pattern, having in warp and woof in the space of a square centimetre 25 threads or less 10 9, 25 to 35 threads 20 9, 35 to 50 threads £2 10s 10d, above 50 threads £4 4s 8d, sailcloth 10 9, carpets, not included above £1 2s 7d, ticks and "corset webbing" not included above £2 10s 10d, other tissues of linen and hemp £4 4s 8d, tissues of jute unbleached or undyed free, bleached or dyed £1 2s 7d, waxed and oilcloth, floorcloth 14 1, other kinds £1 13s 11d, tapes and ribbons £3 2s 1d, braces and belts £1 13s 11d, blous painted or printed £2 12s 10d, lace and blonde £6 12s 8d, fringes, galloons, cords, cordings, &c. £3 2s 1d, hosiery, gloves, stockings, &c. £3 6s 7d, ready-made clothing, sheets, towels, &c., hemmed or with needlework as the material of which made with an addition of 20%,

8z. 8z. Tissues, plain, twilled, figured, unbleached or half-bleached, having from 14 to 22 threads in a square of 5 mm, also unbleached or half-bleached, having more than 22 threads per square of 5 mm, and all bleached, dyed, or printed tissues except tulle 6 6 (warp and woof both included), tulle, plain or figured, unbleached, bleached, dyed, printed 12 2½, ribbons and haberdashery, also hosiery 6 6, embroidery and lace 12 2½, cords, ropes 1 2½, string and band, unbleached, not twisted, 4/10½, other cord-makers wares, such as string and band twisted, bleached, dyed, also threads 6 6, sacks and hose 8 1½, mats of jute, Manilla hemp, coco, and similar vegetable fibres, coarse 4 0½, ditto, dyed, printed, &c. 6 1, jute carpets, dyed, printed, &c., 2 10½, oil cloth, common, 1 2½, oiled linen for packing 3 3, clothing, underclothing, and other articles ready-made or linen with needlework £1 8s 6d, gloves for rubbing of hair, without needlework 6 4, linoleum, tapestry (lincustra) 7 11 ;

T. USC. T. All kinds 8½ a v ; **USC.** Per kilo, empty bags or sacks of tarred or not, with or without unpermeable paper, and also the hemp, ordinary fabric they are made of 1½d, coleta 5d, common unbleached fabrics, as creguela, sheeting, brine, duck, caserills, and fabrics for awnings, excepting drills 1 3, fine unbleached fabrics, not otherwise mentioned 2 6, brown, white, and coloured drills, creas, platillos ulemanisco, fabrics for table-cloths, towels, and napkins, bed-covers lining for beds, ribbons, sheeting, and like articles not otherwise mentioned, all without sewing or embroidery 3 4, handkerchiefs, caps, socks, gloves, Britannias, coquillo, estopilla, picardia, irlandia, labales, roarrandop, fine cambric, and listados imitating that fabric, of cotton, fringes, galloons, bandages, braids, cords, tassels, and other like articles, and ready-made clothing, without embroidery, lace, or other ornaments subject to higher duty 4½, all kinds of embroidered fabrics or meshed, and imitations, including laces, embroideries, and like articles, and in ready-made clothing not otherwise mentioned 5/, varnished fabrics for roofing of country buildings and bridges 2½d, common fabrics, prepared or varnished, for floors, and common oil-cloth for coaches, excepting that for table-covers 10d, mixed fabrics pay same rate as highest material contained ; **Ur.** Jute cloth in pieces 20% a v ; **Ven.** 2nd class, hemp ; 3rd class, flax, bagging, fishing tackle ; 4th class, bags, canvas ; 6th class, arabias, checks, domestic, sheeting, bramant (unbleached), Irish linen (unbleached), ticking (unbleached), bramant, bleached, Britannias, damask, counterpanes, table-cloths, drills, towels, hammocks, rouen linen, poplins, umbrellas, bleached Irish linen, bleached ticking ; 7th class, braid, belts, curtains, cravats, cord, fancy trimmings, fringes, fustians, girths, gloves, galloons, lace, mosquito-netting, muslins, pillow-cases, petticoats, ribbons, tassels ; 8th class, cloaks, cambric, collars, cuffs, cloths, gauze, handkerchiefs, lawns, night-caps, ruffles, shirts, shirt-bosoms, shawls.

Woven Manufactures (Silk).—A. Silk, reeled, also twisted, made white or coloured, or in connection with other spinning materials, floss silk (silk scrap) spun, also twisted, bleached or in connection, &c. 5½d per lb, silk goods, embroidered or with metal threads, tulle, gauze, blondes, laces (lace handkerchiefs) 3½ per lb, trimmings made of silk or half silk, cords, chenilles, &c., and ready-made trimming 4½ per lb pure silk goods (i.e., goods made of silk or floss silk alone), plain

Woven Manufactures—*continued*.

- tissues 1.9½, other than plain 3/7½, hosiery, haberdashery, and button-makers' wares 3/7½, other pure or floss silk goods 4.6½, half silk velvets and velvet ribbons 3/7½, other manufactures of half silk 2/3½, very common tissues of coarse woven waste silk 2½d, oiled silk 3½d, ready-made clothing as material of which made with 40% additional; Ar. Silk thread 5% a v, stuffs, braid, trimmings and cords 40% a v; B. Tissues of all kinds and and hosiery, haberdashery and ribbons 11 per lb, or at option of importer 10% a v, net and lace made by hand free, ready-made clothing 10%; Br. Tulle, barèges, broad stuffs 28'000 per kilo, corsets 2'000 each, ribbons 5'000 per kilo, scarves 24'000 to 30'000, gloves, stockings 24'000, black plush in combination with cotton 5'000, others of silk only 24'000, in combination with cotton 13'000, laces in combination with other materials 16'000 and 30%, ready-made clothing 15'000 or 60% a v, velvet, satin 14'000, in combination with other materials 7'000 and 30%, silk velvets 6'000, silk gauzes 14'000, ribbons 5'000, coarse silk goods 2'250, silk ties 15'00; C. Socks and stockings, ribbons, shawls, velvets, ready-made clothing, Ch. silk manufactures of all kinds 35% a v; Ch. Clothing 100 catties 10'0'0'0, silk, raw and thrown 100 catties 10'0'0'0, yellow, from Szechwan 7'0'0'0, reeled, from Dupions 5'0'0'0, wild, raw, 2 5'0'0, velvets not exceeding 34yds long, per piece 0'1'8'0, silk and cotton mixtures 100 catties, 5'5'0'0, refuse 1'0'0'0, cocoons 3'0'0'0, refuse 5% a v, cocoon skins (shells) 5% a v, floss (Canton) 4'3'0'0, from other provinces 10'0'0'0, ribbons and thread 10'0'0'0, ditto interwoven with imitation gold or silver 18'0'0'0 or 5% a v optional, piece goods 12'0'0'0, ditto Szechwan and Shantung 4'5'0'0, tassels 10'0'0'0; Cor. a v, raw, waste, &c, 8%, fabrics, Japanese, white, haberta, damasks, gauze, &c, 10%, velvet 20%; D. Silk wares, wholly of silk 4.0½ per lb, of silk mixed with other material, if either warp or woof or face is of pure silk 2.8½ per cwt, other kinds 1/6½, haberdashery, trimmings and buttonmakers' wares 2 0½, oiled silk and silk mixed with indiarubber 1, ready-made clothing, when not lined or trimmed or when the lining or trimming is not liable to a higher duty than the material of which made, as the material of which chiefly composed with an addition of 50%, when the lining or trimming is liable to a higher duty than the material of which made, as the material of which chiefly composed with an addition of 100%; E. Per kilo, gold and silk embroidered articles 4/2; F. Of pure silk, tissues, hosiery and haberdashery, lace, crape, net or tulle foulards free, tissues, hosiery and haberdashery, of pure floss silk or of silk and floss silk, unbleached, bleached, printed or dyed 8½d per lb, tissues of waste floss silk for furniture weighing more than 250 grammes to the square metre 6½d, tissues, haberdashery and lace, of silk or of floss silk mixed with fine gold or silver 4'4½ per lb, ditto semi-fine or false gold or silver 1'3½, tissue of silk or of floss silk mixed with other materials in which the silk or floss silk predominates in weight 11, ribbons of silk or floss silk, pure or mixed with other materials, velvet, 1 9½, other kinds 1/5½, ready-made clothing and articles wholly or partly made up 10% above highest rate chargeable on material of which composed; G. Haberdashery and buttonmakers' wares of silk or floss silk 2 8½ per lb, ditto of silk or half silk in combination with metal threads 3/7½, hosiery of silk or floss silk 2/8½, ditto in combination with metal threads 3/7½, lace and blonde 2/8½, if with metal threads 3/7½, embroidery 2 8½, ribbons of silk 3/7½, of half silk 2'0½, gauze and crape 4 6½, tulle-figured 2'8½, with metal threads 3/7½, dyed or unbleached 1 1½, very coarse tissues of unbleached silk waste, as grey packing cloth, press cloths, &c., combined or not with other materials or with a few dyed threads ½d per lb, other silk wares in combination with cotton, linen, wool or other spinning materials 2'0½, ready-made clothing of silk or floss silk, pure or combined with metal threads 5 5½, ditto of half silk 3 0½, oiled silk 2½d; Gr. Of silk pure or mixed, lace and blonde, fichus, crape, edgings with or without metallic or glass ornaments £2 6s 1d per lb, embroidery, tissues with metallic threads, ribbons, hosiery and shirtmakers' wares, cords and sewn articles not specially distinguished 11 10½ per 2'84 lbs, tulle, gauze, and batiste 6 4 per 2'84 lbs, fringes, haberdashery and galloons of silk with or without ornaments of glass or metal 6, 10½, haberdashery and

Woven Manufactures—continued.

- gallons of silk mixed with other materials of 1½, velvet and plush of 2, tulle of silk of all colours not specially mentioned 1½, tulle of silk mixed with other materials not specially mentioned 1½, ready-made clothing for men and boys pays the duty on the description of article of which composed with an addition of 20%, ready-made clothing for women and girls 1½, 1½ per 1½ lb, silk with 1½. **May.** Lace, white, per ell, 3d, narrow ditto 3d, veils, per dozen 1, ribbons, per piece of 10 ells, 3d, of silk velvet, ditto, 3d, rosettes buttons each 3d, pavers, each 3d, mantillas, ladron, per dozen 1, 10 and, ditto, young girls ditto 3d, handkerchiefs, black and coloured, from 1 to 1½ each, 10 and for children, with fine gold or silver, each 1½, ditto with imitation gold and silver, each 1½, for dresses, per couple 1½, for shawls, per pair 1½, silk velvet (with for dresses, per ell 3d, fringe ditto 1d, plush ditto 3d, silk velvet, ditto 1½, cloth and other embroidered stuffs, ditto 1½, gown of Naples, embroidered, plain or striped, satin, plain or without flowers, tulle, and other stuffs of worked silk, for dresses, per ell 1d, bristling, Florence, 3d, silk, each 1½, 1½, 1½ and plaid of silk and silk and flow silk, black, 1½, 1½, figured 1½, not used containing from 1½ 1½, silk tulle, mostly black plain 1½, figured or embroidered in chains or of which composed in lace each 1½ per lb additional, narrow tulle of same and velvet silk exceeding one gramme per square metre and containing 10 and over silk tulle, plain and, figured 1½, silk, ribbons, and gallons. 1½ additional to duty on tulle of which composed, heavy and knitted goods, plain, on tulle of which composed, shaped 1½, additional to duty on heavy plain, bands or ribbons, lace, tulle, crapes, and bands containing not less than 1½ silk 1½, lace and tulle plain 1½, figured 1½, tulle with metallic threads of gold and silver 1½ additional to duty on tulle of which composed, of common metal 3d additional, lustrous covered with silk or flow silk or mixed with other materials 1½ ready-made articles on tulle of which composed with 30% additional.
- III.** Silk and silk tulle, umbrellas, sunshades and parasols of silk, or of silk with an admixture of cotton, linen or wool of all kinds 1½ each, raw silk of all kinds 1½ or 2 per lb, silk, with an admixture of other materials, combs of silk or silk and cotton or silk and wool, with metal ornaments other than gold and silver 1½ or 3, silk hats with an admixture of cashmere or of cotton and undressed 1½ or 2, elastic web of silk and undressed or of silk and undressed mixed with cotton, linen or wool, more than 1½ centimetres wide (gross) 1½; **For lb.** Silk, thrown or raw in skeins 1½, ditto on bobbins 1½, crepe of burnt handkerchiefs, tulle or other tulle 1½, ribbons or bands, plain worked or embroidered 1½, diamond braid, and other similar narrow, plain, figured or embroidered 1½, gauze, muslin, lawn, crapes lace tulle and similar tulle 1½, pocket handkerchiefs, scarves, shawls and similar articles 1½, satin, tulle, tulle, serge and any other similar articles, plain, worked or embroidered 1½, velvet plain or figured 1½, ornaments of any kind lace, fringes, plaids, &c. 1½, tulle and gallons 1½, women's wearing apparel, gaiters, jackets, bodices, caps and any other kind of clothing for men and women including nightcaps 1½, men's, washings, drawers, buttons, gloves and any article of heavy 1½, handkerchiefs for men or women 1½, pavers, buttons and washings 1½, ribbons of half-silk 1½, ditto of silk 1½, vestments, ecclesiastical, and ornaments for holy images and purposes of divine worship, such as stoles, chasubles, chucks, galls, &c., ornamented or not with trimmings, 1½. (Note.—Articles of silk mixed with wool, linen or cotton, pay duty as silk.)
- IV.** Manufactures of silk, pure or mixed with other materials, blouses, bodices, lace or tulle 1½ per lb, velvet and plush other silk woven, pure or mixed, trimmings, fringes, &c. 1½, silk 1½, ready-made clothing as materials of which made with an addition of 10%, **For lb.** silk and flow silk, spun and twisted 1½, tulle, smooth or twisted, in pieces, crepe or handkerchiefs 1½, from 10 to 100, ditto, mixed with cotton in the wool 1½, from 10 to 100,

Woven Manufactures—continued.

(c) tissues not specially named, weighing per square metre (1) above 500 grammes £2 10s 10d, (2) 500 grammes and less £4 11 4d, (3) 200 grammes and less £5 11s 10d. (NOTE.—The above tissues woven throughout with cotton warp of one colour, not figured (imitation cloth) weighing more than 300 grammes per square metre £2 10s 10d; (d) Velvet and velvet-like stuffs, printed wares, including felts, haberdashery and hosiery £4 11 3d, (e) open-woven wares £3 11 6d, (f) lace cloths, embroidered stuffs, tissues mixed with metal threads and shawls and similar tissues £10 3s 3d, (g) ready-made clothing, as materials of which chiefly composed and 40% additional, blankets 2s, a v; B. Woollen tissues, India cashmere shawls and scarves s, a v, all other manufactures of wool or hair 10%; BR. Woollen broads 4s per kilo, woollen laces 14'000 per kilo, blankets 13'400 per kilo; Ch. Woollens and cotton mixtures, viz., broads plain and bordered, not exceeding 31 yards long, per piece 0'2'0", woollen blankets per pair 0'2'0", broadcloth and Spanish stripes, habit and medium cloth 51in to 64in wide per chang 0'1'2", long ellis 31in wide per chang 0'0'4'5, camlets, English 31in wide per chang 0'0'5", ditto Dutch 33in wide 0'1'0", ditto imitation and bombazettes 0'0'3'5, cassimeres, flannel and narrow cloth 0'0'4", lings, 31in wide 0'0'5", ditto imitations and Orleans 34in wide 0'0'3'5, bunting not exceeding 24in wide, and 40 yards long, piece 0'2'0", Spanish stripes, inferior, per chang 0'1'0'0; Cor. E, a v; D. Felt for sheathing ships and roofing felt 12 per cwt, undyed unprinted felts, wares of cloth list and carpets £1 8s 3d, open transparent tissues, combined or not with metal threads or spun glass, crochet, lace, fringes, trimmings and buttonmakers' wares £5 12s 11d, other tissues £3 15s 3d, ready-made clothing, when not lined or trimmed, or when the lining or trimming is not liable to a higher duty than the material of which made, as the material of which chiefly composed with an addition of 50%, ready-made clothing, when the lining or trimming is liable to a higher duty than the material of which made, as the material of which chiefly composed with an addition of 100%; E. Per kilo 1'64; F. Manufactures of wool, pure, unmixed, cloths, casimirs and other milled tissues, and short napped tissues not milled, stuffs for furniture weighing more than 400 grammes to the square metre £2 0s 8d per cwt, moiré £1 0s 4d, other kinds, weighing $\frac{3}{4}$ lb or less to the square yard £2 16s 11d, above $\frac{3}{4}$ lb to 1 lb inclusive to the square yard £2 10s, above 1 lb to the square yard £2 3s 1d, carpets, tapestry carpets (moquette bouclée) 18/3, velvet tapestry (moquette veloutée) £1 2s 4d, eastern £3 15s 7d, from the Jacquard loom (Brussels, Wilton and Kidderminster) chenille (Axminster) and other £1 12s 6d, hosiery of pure wool, gloves and articles of clothing not fitted £10 13s, other kinds, cut out and without seams £2 8s 9d, other kinds shaped or with the foot shaped out £4 13s 4d, fringemakers' wares and ribbons £4 1s 3d, fez caps and "bonnets rouges" 3½d each, hangings (tapestries) £10 3s 3d per cwt, shawls embroidered or figured, other than cashmere £6 10s 1d, tartans, not embroidered, containing 25 to 50% of cotton £1 12s 6d, containing less than 25% of cotton or wholly of wool £2 6s 9d, lace £6 1s 11d, worsted velvets for furniture £3 13s 2d, bolting cloth, seamless £3 5s, blankets £1 2s 4d, list slippers and fur-lined shoes (called Strasburg shoes) £1 15s 4d, cloth list, free, woollens mixed with other materials, cloths, casimirs and other milled tissues, with cotton warp, short napped tissues not milled, wool predominating, weighing to the square metre 0'37 lb or less to the square yard £2 16s 11d, 0'37 lb to 0'55 lb inclusive to the square yard £2 6s 9d, 0'55 lb to 0'74 lb inclusive to the square yard £1 16s 7d, 0'74 lb to 1 lb to the square yard £1 6s 5d, 1 lb to 1½ lb inclusive to the square yard £1 0s 4d, above 1½ lb to the square yard 14/3, mixed tissues, the warp of floss silk, wool predominating £4 17s 6d, carpets of wool and other materials mixed, in whatever proportion, as carpets of pure wool, hosiery as hosiery of pure wool, other kinds, wool predominating as tissues of pure wool, tissues of alpaca, lama, vicuna and camels' hair, pure or mixed with other materials, alpaca, lama, vicuna or camels' hair predominating as tissues of pure wool, tissues of goats' hair manufactured in Europe as tissues of wool, other tissues of hair (poils), mixed or not with other materials, most hair (poil) 12½, ready-made clothing and articles wholly or partly made up, 10% above highest rates charge.

B.

BR.

Ch.

Cor. D.

E.

F.

Woven Manufactures—continued.

- able on material of which composed. (NOTE.—Woollen tissues mixed with cotton or any other material will pay as tissues of wool, provided the wool predominates in weight.) **G.** Tissues of wool or hair, pure or mixed with cotton or linen or metal threads (1) cloth list free, (2) coarse, unprinted, undyed felt 1 6½, per cwt, (3) carpets containing dyed or undyed yarn of animal-hair 12 2, (4) unprinted felts except those specified under No. 2 and felt wares, unprinted hosiery, carpets, printed or not, of wool, plain or in combination with other materials £2 10s 10d, (5) unprinted cloths and stuffs (not included under Nos. 7 or 8) (a) weighing more than 200 grammes per square metre £3 8s 7d, (b) weighing 200 grammes or less per square metre £5 11s 10d, (6) (a) printed wares (except carpets) weighing more than 200 grammes per square metre, fringe and buttonmakers' wares, plush, tissues combined with metal threads £3 16s 3d, (b) printed wares (except carpets) weighing 200 grammes or less per square metre £5 11s 10d, (7) lace, tulle and embroidery, also woven shawls of three or four colours £7 12s 5d, (8) woven shawls of five or more colours £11 8s 8d, (9) ready-made clothing £7 12s 5d; **Gr.** Woollen or hair tissues, coarse cloths, scutis, serges, coarse quilts, sashes and girths, ready-made clothes for sailors and thick cloaks made of coarse woollen tissues £1 12s, carpets, &c., carpets of animal hair 12/10, printed or made of felt £1 18s 5d, of dyed thread, woven or knit 1 7 per 2'84 lbs, Persian, Georgian and similar carpets £9 12s, tablecloths, curtains and door coverings £15, flannel shirts of any colour, roughly knit or woven and sewn, stockings of very coarse make, shawls of wool or of wool mixed with cotton, travelling bags, sailors' caps, bed and table covers of wool and cotton mixed £2 11s 2d, felt for hats and all felt, except for carpets and machinery and cloth list free, flannel shirts of every colour, finely knit or sewn, stockings finely knit or woven shawls and travelling caps, and bed and table covers of pure wool £8, velvet tissues, coverlets, ribbons, fringes and haberdashery, strings, edging cords, tassels, common shawls printed, small knitted shawls, sewn articles and felt tissues not included above £9 12s, shawls and cashmere shawls of merinos and similar tissues, lace, tulles, grenadines, fichus, embroideries and needlework mixed with metallic threads or not £19 4s, tissues of wool or other animal hair of any colour and make not specified (with the exception of fine tissues such as those included in the foregoing class) up to 150 grammes per square metre £19 4s, ditto 250 £12 16s, ditto 350 ditto £8, above 350 £4 16s, similar tissues having the warp or wool entirely or in great part of cotton up to 200 grammes per square metre 1 7 per 2'84 lbs, above 200 1 per 2'84 lbs, fine ready-made clothing entirely of wool for men and children (for summer wear) £12 16s, ditto entirely of wool, thick, for winter £9 12s, ditto of cotton and wool, mixed, for summer and winter £5 4s, dresses for women and girls entirely of wool or not £24; **Hay.** Stuffs for trousers from ½d to 6d per ell, lace, narrow, per ell 1½d wide, ditto 2½d, raw wool, per lb 2d, shawls, per doz 12'6, socks 2 1, ribbons, for mattresses, per piece of 12 ells 1½d, shoes from 1'0½ to 6'3 per doz; **H.** Felt for paper manufacture free, all other woollen manufactures 5% a v, ready-made clothing 5% a v; **I.** Per cwt, tissues of carded wool weighing 300 grammes or less per square metre, £4 1s 3d, 300 to 500 grammes £3 11s 1½d, above 500 grammes £3 1s, tissues of carded wool with stamped threads £3 19s 2d, tissues of combed wool, all such tissues as contain even a non-predominating portion of that material, and those which contain silk in a less quantity than 12 per cent, weighing 200 grammes or less per square metre £5 1s 7d, 200 to 500 grammes £4 9s 5d, above 500 grammes £3 17s 3d, tissues of combed wool with warp composed entirely of cotton £2 16s 10d, printed 20'3½ additional to duty on tissue of which composed, brocaded 16'3 additional, embroidered in chain stitch £4 1s 3d additional, in lock stitch £6 1s 11d additional, tissues of wool closely joined together with a strip of indiarubber £4 10s 7½d, felts above 3 millimetres in thickness 8'2, under 3 millimetres as tissue of carded wool, tissues of hair, sieve cloth 12'2½, all other £2 4s 8d, hosiery and knitted goods £4 9s 5d plain, shaped £6 14s 1d, braids £4 9s 5d, galloons and ribbons £4 17s 6d, buttons £4 17s 7d, blankets, rugs &c. of ox, goat or sheep hair, undyed, with warp of flax or cotton 24'5, blankets &c. of wool or wool waste, undyed according to quality of tissue, including those in which other textiles, with the

Woven Manufactures—continued.

- exception of silk, predominate in weight £2 2s 8d, tissues with metallic threads of gold and silver 1/9d per lb additional to duty on tissue of which composed, of common metals 8d per lb additional, ready-made articles as tissue of which composed with 40% additional, jackets of wool for men partly lined with tissue of mixed silk 3/2 and 3/11d per kilo, and 50% for making up; J. Mattings, floor 75 cents per 10 yards, oilcloth, floor 70 cents per 10 yards, oilcloth, furniture 15 cents per 10 yards; M. Woollen tissues, unenumerated, of all kinds, not embroidered, 1 w 2'25 per kilo, ditto embroidered with any material other than gold or silver 3'50, woollen lace and netting, and all manufactures of these materials, even though ornamented with silk or metal other than gold or silver 1 w 8'00, ruching of mousseline de laine with or without woollen lace and small silk ornaments 1 w 5'50, shawl handkerchiefs or shawls, large and small, of wool, of all kinds, not netted, with or without woollen embroidery, and with or without fringe of wool silk and wool or silk and cotton n w 3'50, ditto with borders, squares, or silk embroidery and with fringe of any material n w 5'50, elastic web of wool of more than 4 centimetres in width (gross) 0'80, woollen tissues of all kinds weighing up to 100 grammes per sq. m. n w 2'75, ditto from 100 to 250 grammes n w 1'50, ditto from 250 to 450 grammes n w 3'00, ditto from 450 to 600 grammes n w 2'50, ditto of more than 600 grammes n w 2'00; NI. Wearing apparel, made up, woven or knitted 10% a v; Nic. Per lb wool, raw 5d, sewing and embroidery thread 2/1, alpacas, cabicas, lastings, and similar tissues 1/5d, carpets large and small, mantles for children, and similar articles 11d, cassimere, satin, drugget, and flannel 2/1, lace, ornaments, and small wares 2/8d, fringes, cords, tufts, and borders for window and door curtains 2/6, thick stuffs (jergas) 1/5d, merinos 2/1, muslin, gauze, and other stuffs for ladies' wear, plain, figured, or embroidered 2/1, pelisses and furs of sheepskins 1/8, lace, tulle, crape, in pieces or worked 3/1d, galloons and ribbons of all kinds 1/8, table mats, damask, brocade, and scarves 2/1, shirts of all kinds 1/8, blouses, counterpanes, carpet bags, and ponchos 9d, stockings, socks, waistcoats, drawers, gloves, and similar articles of hosiery 2/1, shawls 2/6, ditto with embroideries or fringes of silk 4/2, trousers, jackets, overcoats, and ready-made clothing for men's wear 3/1d, clothing, finished, for women's wear, or separate pieces of clothing, plain or ornamented 4/2. (NOTE.—Articles of cotton or linen, mixed with wool, pay as wool, and articles not distinguished of wool, mixed with silk, pay as silk.)
- N. N. Felt for machines, cloth list and cloths for paper machines free, felt other kinds £2 5s 2d per cwt, carpets and blankets and girths £1 6s 6d, knitted wares, coarse stockings, jackets, mittens, &c. 15/3, other kinds £3 2s 1d, ribbons and tissues mixed with india-rubber or gutta percha, and waistbands of the same £3 2s 1d, other tissues, lace, tulle, bobbinet and blonde £7 1s 2d, other open or transparent tissues £4 19s 4d, close-woven tissues embroidered with silk or metal threads £6 9s 10s all other kinds £2 5s 2d, trimmings, buttons, fringes, &c. £3 16s 3d, ready-made clothing as the material of which made, with an addition of 10%. (NOTE.—Tissues of wool mixed with silk pay as silk, and tissues of cotton mixed with wool pay as above.)
- Per. PR. Per. Wool, unwashed, washed 40%; PR. Per kilo, felt carpetings, horse blankets, and other uses, with or without handwork 14 cs, carpetings, Brussels, with or without handwork 39 cs, plain or twilled goods, of wool or mixed, with other materials, with hair on one or both sides, not cleaned, as coating, baize, blankets and similar goods 17 cs, cloths, cassimeres, ladies' cloth (elasticotines), lawns, and like goods (wool only) 1 peso 45 cs, ditto mixed with cotton 68 cs, goods, plain, smooth, pure wool, or mixed with cotton, as alpaca, Orleans, fine woollen stuffs, fetaila, and like goods up to 14 threads 50 cs, ditto 15 to 20 threads 78 cs, 21 threads and upwards 1 peso 29 cs, goods, worked, crossed, twilled, or damasked, wool only, as merino, damask, rep, alpaca, serge, and like goods 1 peso 45 cs, ditto mixed with cotton 68 cs; P. Per kilo, wool not manufactured, dyed 35 r, thread for embroidery, white 1'305 r, ditto coloured 2'120 r, thread not otherwise mentioned, white 510 r, ditto coloured 810 r, merinos 1'090 r, flannels pure or mixed 1'300 r, baizes 530 r, blankets 850 r, cloths 1'610 r, shawls and handkerchiefs 2'160 r, carpets 270 r, stuffs not otherwise mentioned 985 r, stuffs not otherwise mentioned, with the whole weft or warp of cotton, linen, or any other similar tissues 654 r, felt tissues,

Woven Manufactures—*continued.*

- on silk or varnished ground 280 r, garters and girdles 1'615 r, bags (*alforjes* or coverlets) 320 r, knitted tissues and other wares 1'405 r, trimmings, ribbons, and galloons (including the tares, except boxes) 760 r; R. Tissues of wool, coarse coverlets with long hair halina cloth, coarse cloth carpets of all kinds 12½ per cwt, cloth and other tissues analogous to cloth not printed, also flannels of all kinds, white or coloured £1 3s 7d, all other woollen tissues not included above, except shawls and lace, also haberdashery and fringemakers' wares, hosiery of all kinds, trimmed or not with other tissues £1 12s 6d, shawls, embroidered and figured, other than Indian shawls £10 3s 3d, Indian shawls £10 12s 8d per cwt, lace £24 7s 10d, felt all kinds, also the following articles of felt, shoes and soles for shoes and coarse felt hats for peasants and soldiers 8½, articles of felt other than those named above 10½ carpets of wool of all kinds 12/3, felt, thick common, undyed or dyed of one colour 18/3, felt for carpets of all colours, printed or not £1 16s 9d, felt of all colours, semi-fine or fine £3 1s, articles of felt of all colours, semi-fine or fine £12 4s, clothing made up or not £3 5s to £24 according to sections under which from its composition it is charged, tissues or knitted wares of hair, tissues of all kinds £3 5s, knitted wares of hair, small wares, hats not made up £12 4s, mixed tissues, tissues of wool mixed with silk only or with silk and cotton, the silk forming only a design or ornament £6 2s, small wares and ribbons of wool mixed with other materials £8 2s 8d; Rus. Flannel, blankets, and horse cloths £8 13s 5d† per cwt, tissues of wool or goat's hair, fulled or unfulled, pure or mixed with cotton, plain, figured or embroidered, not otherwise enumerated £17 14s 8d†, (1) the same tissues printed pay 30% additional, (2) unmilled stuffs of wool or goat's hair having a warp or woof of silk, or of waste silk, pay as silk goods, but if the admixture of silk or of waste silk consist only of patterns or stripes, woven in or embroidered, such goods pay 20% in addition to the duties on unmilled stuffs, plain or printed, (3) handkerchiefs, scarves, &c., except those named below, pay duty as material of which made, bunting and white woollen stuffs for millers' sieves, sashes of wool without admixture of silk £4 18s 6d†, shawls, handkerchiefs, sashes and scarves, Turkish or Cashmere, and detached borders edgings and trimmings thereof, also French terno or half terno, or wool, pure or mixed with cotton, silk or waste silk £65 0s 5d†, unmilled woollen stuffs for use in manufactories, bags for oil pressing, sugar-bakers, &c., cloth list and felt undyed, dyed or printed £2 3s 4d,† *fezes* or Turkish caps of wool, embroidered or not with spangles 7/7 per dozen,† carpets £7 17s 3d per cwt,† hosiery and haberdashery (galloons, braid, &c.) and knitted wares also gloves, tapes and ribbons of wool, pure or mixed with cotton, flax or hemp £12 15s 7d.† (NOTE.—If embroidered or otherwise ornamented with silk 20% additional, ladies' and children's gloves trimmed with lace, &c., pay as articles of clothing trimmed.) Buttons £11 15s 11d,† lace £68 16s 2d, hand-made £129 15s 1d, ready-made clothing for men £30 9s 6d, cloaks, &c., for ladies, trimmed or not £47 3s 8d,† other clothing for ladies untrimmed £53 1s 8d,† trimmed with ribbons, feathers, fur, embroidery or lace £82 11s 5d,†; S. Carpets £2 0s 6d per cwt, felts of all kinds £1 4s 5d, blankets and horsecloths £3 12s 4d, cloths and similar tissues of pure wool, waste wool, hair, or mixture of these materials £8 14s 9d, such tissues when the warp is wholly of cotton or other vegetable fibre, and astrachans and plushes of the same materials £5 5s 8d, knitted wares of pure wool, or of wool mixed with cotton or other vegetable fibres £7 1s, other tissues of pure wool, waste wool, hair or mixture of these materials £7 2s 3d, such tissues when the warp is wholly of cotton or other vegetable fibre £4 8s 2d, tissues of wool and silk (see silk tissues mixed), fringes, galloons, cordings, &c. £5 1s 7d, ready-made clothing, embroidered articles, as materials of which made with an addition of 30%, tissues of wool mixed with silk, the warp or wool being wholly of wool £10 3s 3d; Sn. Woollen tissues, pure or mixed with linen or cotton, felts and carpets £1 13s 11d, filtering cloth, called *press-duck* 11¼, other kinds £4 18s 10d, tapes and ribbons £3 2s 1d, braces and belts £1 13s 11d, lace and blonde £6 12s 8d, galloons, trimmings, cords, cordings, &c. £3 2s 1d, hosiery, gloves, stockings, &c. £3 6s 8d, ready-made clothing, as the material of which made with an addition of 20%, embroidered articles as the material upon which embroidered with an addition of

Woven Manufactures—continued.

- Sz.** 20%; **Sz.** Raw, washed, waste, flock, shoddy, 1'46d, cured, dyed, combed 2'92d, stuffs of wool, common for blankets, in the piece, unbleached or with coloured stripes 4/9, yarn, dyed 3/7½, tissues bleached, dyed, printed 10/2, blankets of all kinds, without needlework 6/6, ditto with needlework, also ribbons 12/2½, haberdashery, also hosiery 10/2, embroidery and lace, shawls and scarves 10/2, carpets, common, without fringe or needlework 5/9½, ditto other 10/2, shoes of list, also felt in the piece 6/6, manufactures of felt without needlework 2/10, ditto dyed, printed 6/6, ditto as hats, not trimmed 12/2½, tissues of felt, common, for paper-making £1 8s 5½d, felt covered with a layer of cloth 2/9½, clothing, underclothing, and other articles ready-made of wool or half wool, with needlework 16/3½, mattresses, pillows, filled, trimmed £1 0s 4d; **T.** 8% a v; **UR.** Cotton ticking 0'25 per kilo, chintzes 0'28 per kilo, cotton tissues 0'155 per kilo; **USC.** **USC.** Per kilo, not manufactured 2½d, blankets 2'1, carpets for floor or rugs 2/11, base, heavy coarse cloth, serge, 3/9, transparent fabrics, all kinds of embroidered or meshed fabrics and its imitations, including laces, embroidery, and like articles, ready-made clothing 5', mixed fabrics pay the same as highest material contained; **Ven.** 4th class, wool manufactured, 5th class, blankets, 6th class, counterpanes, umbrellas, 7th class, alpaca, braid, belts, aps, cravats, cassimere, casinet, cambrow, cord, damask, epaulettes, fancy trimmings, fringes, gloves, galloons, lace, nubias, ribbons, stocks, socks, saddlecloths, shawls, serge, tassels, tablecloths, undershirts, 8th class, curtains, hangings, shirts, shawls and tablecloths with silk borders or trimmings, 9th class, adornments and clothing for women and children, cloaks, paletots, overcoats, ready-made clothes.

Writing Machines.—See Paper, &c.

Wrought Iron.—See Iron and Steel.

Yarns and Thread (Cotton).—**A.** Yarns, single raw, per 100 kilos up to No.

12 English 6/1, No. 12 to No. 29 8/2, No. 29 to No. 50 14/3, above No. 50 16/3, double raw up to No. 12 8/2, No. 12 to No. 29 10/2, No. 29 to No. 60 16/3, above No. 60 12/2, single or double, bleached or dyed, up to No. 12 12/2, No. 12 to No. 29 14/3, No. 29 to No. 50 18/4, above No. 50 £1 0s 4d, with three or more threads, twisted, raw, bleached, or dyed £1 4s 5d, prepared for the retail trade, weavers' heddles made out of twisted yarns £1 15s 8d, cotton tissues, common, plain, raw £1 14s 7d, bleached £2 5s 10d, dyed £2 15s 11d, woven in various colours, printed £3 6s, common figured, raw £2 5s 10d, bleached £2 15s 11d, dyed £3 6s, woven, &c. £4 1s 4d, common close, raw £2 15s 11d, bleached £3 6s, dyed £3 16s 3d, woven, &c. £4 11s 5d, fine raw £4 1s 4d, bleached, dyed, woven, &c. £6 2s, superfine (tissues made of yarns above 100) £8 2s 8d, stiff nets £2 15s 11d, embroidered tissues, laces £15 5s, velvets and velvet-like tissues, ribbons, trimmings, buttons, and knitted goods £4 11s 5d, wicks, girths, engine straps, hoses, nets and ropes, coarse £1 4s 5d; **B.** Unbleached and bleached, single or twisted, 20,000 metres or less to the half kilogramme, or 1 1-10 lb avoirdupois 6/1 per cwt, 20,000 to 30,000 metres ditto 8/2, 30,000 to 40,000 metres ditto 12/2, 40,000 to 65,000 metres ditto 16/3, above 65,000 metres ditto 4/0½, warped or dyed, single or twisted, 20,000 metres or less to the half kilogramme 10/2, 20,000 to 30,000 metres 12/2, 30,000 to 40,000 metres 16/3, 40,000 to 65,000 £1 0s 4d, above 65,000 4/0½. (NOTE.—Cotton yarns mixed with other materials pay as cotton yarns, provided the cotton predominates in weight.)

- Br.** **Br.** Single, for weaving or warping, raw or white '160, dyed '200, twisted or wicks for lamps '200, twisted or thread of any kinds, in bobbins, clews, or skeins, for sewing, crocheting 1'000 per kilo; **C.** Carpets, gloves, ready-made clothing 35% a v; **Ch.** Manufactures, viz., blankets per pair 0'2'0'0, broadcloth and Spanish stripes, habit and medium cloth, 51in by, 64in wide, per chang 0'1'2'0, woollen, long ells, 31in wide 0'0'4'5, camlets, English, 31in wide 0'0'5'0, ditto Dutch, 33in wide 0'1'0'0, ditto imitation and bourlaquettes 0'0'3'5, ditto cassimeres, flannel and narrow cloth 0'0'4'0, ditto lastings 31in wide 0'0'5'0, ditto imitation Orleans, 34in wide 0'0'3'5, ditto bunting, 24/40 per piece 0'2'0'0, woollen and cotton mixtures, viz., lustres, plain and brocaded, u.e. 31 yards long, per chang 0'1'0'0, per 100 catties cotton thread 0'7'2'0 yarn 0'7'0'0 **D.** Undyed 7/1, dyed and mixed with metal

IV.—TARIFF OF THE UNITED STATES.

Under an Act to Reduce the Revenue and Equalise Duties on Imports, and for other Purposes; approved October 1, 1890.

Note.—c. = cent; \$ = dollar; p.c., a.v. = per centum, ad valorem.

DUTIABLE LIST.

SCHEDULE A.—CHEMICALS, OILS, AND PAINTS.

Acids.

Acetic or pyroligneous—		
Not exceeding specific gravity of 1'047	per lb.	1½c.
Exceeding specific gravity of 1'047	"	4c.
Boracic	"	5c.
Chromic	"	6c.
Citric	"	10c.
Sulphuric or oil of vitriol	"	½c.
Tannic or tannin	"	75c.
Tartaric	"	10c.

Alcohols and Alkalis.

Alcoholic perfumery—		
Including cologne and toilet waters	per gallon	\$2 & 50 p.c., a.v.
Alcoholic compounds not specially provided for	"	\$2 & 25 p.c., a.v.
Alumina, alum, alum cake, patent alum, sulphate of alumina, and aluminous cake and alum in crystals or ground	per lb.	6-10c.
Ammonia—Carbonate	"	1½c.
Muriate or sal-ammoniac	"	½c.
Sulphate	"	½c.
Blacking of all kinds		25 p.c., a.v.
Blue vitriol or sulphate of copper	per lb.	2c.
Bone charcoal for decolourising sugars		25 p.c., a.v.
Borax—Crude or borate of soda or borate of lime	per lb.	3c.
Refined borax	"	5c.
Camphor, refined	"	4c.
Chalk—Prepared, precipitated, French, and red	"	1c.
All other chalk preparations		20 p.c., a.v.
Chloroform	per lb.	25c.

Coal Tar Preparations.

All coal tar colours or dyes		35 p.c., a.v.
All preparations of coal tar, not colours or dyes		20 p.c., a.v.
Cobalt oxide	per lb.	30c.
Collodion and all compounds of pyroxyline	"	50c.
Rolled or in sheets, but not made up into articles	"	60c.
If in finished or partly finished articles	"	60c. & 25 p.c., a.v.
Colouring for brandy, wine, beer, or other liquors		50 p.c., a.v.
Copperas or sulphate of iron	per lb.	3-10c.
Drugs, such as barks, beans, berries, balsams, buds, bulbs, and bulbous roots, and excrescences, such as nut-galls, fruits, flowers, dried fibres, grains, gums, and gum resins, herbs, leaves, lichens, mosses, nuts, roots and stems, spices, vegetables, seeds (aromatic, not garden seeds), and seeds of morbid growth, weeds, woods used expressly for dyeing, and dried insects, not edible, but advanced in value or condition by refining, grinding, or manufacture, and not specially provided for in this Act		10 p.c., a.v.
Ethers—Sulphuric	per lb.	40c.
Spirits of nitrous ether	"	25c.
Fruit ethers, oils, or essences	"	\$2 50c.
Ethers	"	\$1
Extracts and decoctions of logwood other dye woods, sumac, other barks, for dyeing or tanning	per lb.	½c.
Of hemlock	"	½c.
Gelatine, valued not above 7c. per lb.	"	1½c.
Above 7c. and not above 30c.		25 p.c., a.v.
Above 30c.		30 p.c., a.v.

Glue, valued not above 7c. per lb. ....per lb.	1½c.
Above 7c. and not above 30c.	25 p.c., a.v.
Above 30c.	30 p.c., a.v.
Isinglass or fish glue, valued not above 7c. per lb. ..per lb.	1½c.
Above 7c. and not above 30c.	25 p.c., a.v.
Above 30c.	30 p.c., a.v.
Glycerine, crude, not purified ....per lb.	1½c.
Refined	4½c.
Indigo, extracts or pastes of	¾c.
Carmined	10c.
Ink and ink powders, printers' ink	30 p.c., a.v.
Iodine, resublimed ....per lb.	30c.
Iodoform	\$1 50c.
Licorice extracts, in pastes, rolls, or other forms....	5½c.
Magnesia, carbonate, medicinal	4c.
Calcined	8c.
Sulphate, or Epsom salts.....	3-10c.
Morphia or morphine and all salts thereof .....per oz.	50c.

Oils.

Alizarine assistant, or soluble oil or oleate of soda or Turkey red oil, containing 50 p. c. or more of castor oil.per gall.	80c.
Containing less than 50 p. c.	40c.
All other	30 p.c., a.v.
Castor oil .....per gall.	80c.
Cod liver oil.....	15c.
Cottonseed oil .....per gallon of 7½ lbs. weight	10c.
Croton oil.....per lb.	30c.
Flaxseed, or linseed and poppyseed oil, raw, boiled, or oxidized .....per gallon of 7½ lbs. weight	32c.
Fusel oil, or amylic, alcohol	10 p.c., a.v.
Hempseed oil and rapeseed oil .....per gall.	10c.
Olive oil for salad purposes	35c.
Peppermint oil.....per lb.	80c.
Seal, herring, whale, and other fish oil .....per gall.	8c.
Opium, aqueous extract, laudanum, liquid preparations....	40 p.c., a.v.
Opium containing less than 9 per cent. of morphia and opium prepared for smoking .....per lb.	\$12

Paints, Colours, and Varnishes.

Baryta, sulphate, or barytes (including barytes earth, unmanufactured.....per ton	\$1 12c.
Manufactured	\$6 72c.
Blues, such as Berlin, Prussian, Chinese, containing ferricyanide of iron, dry or ground, in or mixed with oil, or in pulp or mixed with water (on material ex water)per lb.	6c.
Blanc-fixe, or satin white, or artificial sulphate of barytes ..	¾c.
Black—Bone, ivory, or vegetable lampblack.....	25 p.c., a.v.
Chrome yellow, green and all other chromium colours in which lead and bichromate of potash or soda are component parts, dry or mixed with oil, per lb.	4½c.
In pulp or mixed with water, then on material when dry	4½c.
Ochre and ochery earths, sienna, umber, dry .....per lb.	¾c.
Ground in oil	1½c.
Ultramarine blue	4½c.
Varnishes, gold size or japan	35 p.c., a.v.
Other varnishes	35 p.c., a.v.
In addition, on spirit varnishes, for the alcohol contained therein	\$1 32c.
Vermilion red and colours containing quicksilver ....per lb.	12c.
Wash blue, containing ultramarine	3c.
Whiting and Paris white, dry	½c.
Ground in oil or putty	1c.
Zinc, oxide, dry	1½c.
Ground in oil	1½c.
All other paints and colours, whether dry or mixed, or ground in water or oil, including lakes, crayons, smalts, and frostings, not specially provided for in this Act, and artists' colours of all kinds, in tubes or otherwise	25 p.c., a.v.
All paints and colours, mixed or ground with water or solutions other than oil, and commercially known as artists' water colour paints.....	30 p.c., a.v.

Lead Products.

Acetate, white	per lb.	5½c.
Brown	"	3½c.
Litharge	"	3c.
Nitrate	"	3c.
Orange mineral	"	3½c.
Red lead	"	3c.
White lead and white paint containing lead	"	3c.
Phosphorus	"	20c.

Potash.

Bichromate and chromate	per lb.	3c.
Caustic or hydrate, refined in sticks or rolls	"	1c.
Hydriodate, iodide and iodate	"	50c.
Nitrate, saltpetre, refined	"	1c.
Prussiate, red	"	10c.
Yellow	"	5c.

Preparations.

Medicinal preparations of which alcohol is a component, or in preparing which alcohol is used	per lb.	50c.
Of which alcohol is not a component		25 p.c., a.v.
Proprietary preparations of which alcohol is not a component		25 p.c., a.v.
Calomel and other mercurial preparations		35 p.c., a.v.
Alkalies, distilled, essential and expressed oils and all chemicals, compounds and salts not specially provided for		25 p.c., a.v.
Toilet preparations for hair, mouth, teeth or skin		50 p.c., a.v.
Santonine and salts containing 80 p.c. of	per lb.	\$2 50
Soap—Castile	"	1½c.
Fancy, perfumed and toilet	"	15c.
All others		20 p.c., a.v.

Soda.

Bi-carbonate, supercarbonate, saleratus	per lb.	1c.
Hydrate or caustic soda	"	1c.
Bichromate and chromate	"	3c.
Sal soda or soda crystals and soda ash	"	½c.
Silicate of soda	"	¼c.
Sulphate, salt cake, nitre cake	per ton	\$1 25
Sponges		20 p.c., a.v.
Strychnia and all salts thereof	per oz.	40c.
Sulphur, refined	per ton	\$8
Sublimed, or flowers of	"	\$10
Sumac, ground	per lb.	4-10c.
Tartar, cream of, and patent tartar	"	6c.
Tartars and lees crystals, part refined	"	4c.
Tartrate of soda and potassa, or Rochelle salts	"	3c.

SCHEDULE B.—EARTHS, EARTHENWARE AND GLASSWARE.

Brick and Tile.

Firebrick, plain	per ton	\$1 25
Glazed, enamelled or decorated		45 p.c., a.v.
Tiles and brick (not fire brick) plain		25 p.c., a.v.
Ornamented		45 p.c., a.v.
Encaustic		45 p.c., a.v.

Cement, Lime and Plaster.

Roman, Portland, hydraulic, in barrels or packages, including weight of package	per 100 lbs.	8c.
In bulk	"	7c.
Other cement		20 p.c., a.v.
Lime, including weight of package	per 100 lbs.	6c.
Plaster of Paris or gypsum, ground	per ton.	\$1 00
Calcined	"	\$1 75
Clays or earths, unmanufactured	"	\$1 50
Wrought or manufactured	"	\$3 00
China clay or kaolin	"	\$3 00

Marble and Stone and Manufactures of

Marble, rough or squared.....	per cubic foot	65c.
Veined marble, sawed or dressed (no slab computed less than 1in. thick).....	per cubic foot	\$1 10
Other manufactures of		50 p.c., a.v.
Burr stones		15 p.c., a.v.
Freestone, granite, sandstone, limestone, building stone unmanufactured.....	per cubic foot	11c.
Hewn, dressed or polished		40 p.c., a.v.
Grindstones	per ton	\$1 75
Slate, mantels, slabs		30 p.c., a.v.
Roofing slate		25 p.c., a.v.

SCHEDULE C.—METALS AND MANUFACTURES OF

Iron and Steel.

Chromate of iron.....		15 p.c., a.v.
Iron ore	per ton	75c.
Iron sulphur ore containing not more than 3½ p.c. of copper	per ton	75c.
More than 2 p.c. of copper, in addition on the copper	per lb.	½c.
Iron in pigs and kentledge, scraps	"	3-10c.
Bar iron 1in. wide ½in. thick	"	8-10c.
Round iron ½in. diameter, and sq. iron not less than ½ of 1in. sq.....	per lb.	9-10c.
Bar, round and flat, less than above	"	1c.
Round iron less than 7-16 in diameter.....	"	1 1-10c.
Iron bars, blooms, billets made by charcoal fuel....	per ton	\$22
Iron structural shapes.....	per lb.	9-10c.
Plate iron not thinner than No. 10 wire gauge, valued at 1c. per lb.....		5-10c.
Not above 1 4-10c. per lb.		65-100c.
Not above 2c. per lb.		8-10c.
Not above 3c. per lb.		1 1-10c.
Not above 4c. per lb.		1½c.
Not above 7c. per lb.		2c.
Not above 10c. per lb.		2 8-10c.
Not above 13c. per lb.		3½c.
Above 13c. per lb.		45 p.c., a.v.
Forgings of iron or steel	per lb.	2 3-10c.
Hoop, band and scroll iron not thinner than No. 10 wire gauge.....	per lb.	1c.
Not thinner than No. 20	"	1 1-10c.
Thinner than No. 20.....	"	1 3-10c.
Provided, that hoop or band iron, or hoop or band steel, cut to length, or wholly or partially manufactured into hoops or ties for baling purposes, barrel hoops of iron or steel, and hoop or band iron or hoop or band steel flared, splayed, or punched, with or without buckles or fastenings, shall pay two-tenths (¼) of one cent per pound more duty than that imposed on the hoop or band iron or steel from which they are made.		
Railway bars of iron, of steel, T rails, punched iron or steel flat rails.....	per lb.]	6-10c.
Taggers' iron or steel between No. 10 and 20 wire gauge	per lb.	1c.
Between No. 20 and No. 25	"	1 1-10c.
Thinner than No. 25.....	"	1 4-10c.
Corrugated or crimped.....	"	1 4-10c.
Sheets galvanized (in addition)	"	¾c.
Tin plates after July 1, 1891	"	2 2-10c.

All common or black sheet-iron or steel not thinner than No. 10 wire gauge shall pay duty, as plate-iron or steel.

Provided, that on and after July first, eighteen hundred and ninety-one, manufactures of which tin, tin plates, terne plates, taggers tin, or either of them, are component materials of chief value, and all articles, vessels or wares manufactured, stamped or drawn from sheet-iron or sheet-steel, such material being the component of chief value, and coated wholly or in part with tin or lead or a mixture of which these metals or either of them is a component part, shall pay a duty of fifty-five per centum a.v.

Provided further, that on and after October first, eighteen hundred and ninety-seven, tin plates and terne plates lighter in weight than sixty-three pounds per

hundred square feet shall be admitted free of duty, unless it shall be made to appear to the satisfaction of the President (who shall thereupon by proclamation make known the fact) that the aggregate quantity of such plates lighter than sixty-three pounds per hundred square feet produced in the United States during either of the six years next preceding June thirtieth, eighteen hundred and ninety-seven, has equalled one-third the amount of such plates imported and entered for consumption during any fiscal year after the passage of this Act, and prior to said October first, eighteen hundred and ninety-seven.

Provided, that the amount of such plates manufactured into articles exported, and upon which a drawback shall be paid, shall not be included in ascertaining the amount of such importations :

And provided further, that the amount or weight of sheet-iron or sheet-steel manufactured in the United States and applied or wrought in the manufacture of articles or wares tinned or terne-plated in the United States, with weight allowance as sold to manufacturers or others, shall be considered as tin and terne plates produced in the United States within the meaning of this Act.

Sheet iron or steel, polished.....per lb.	2½c.
Plates of iron or steel coated with tin or lead (until July 1, 1891) .....per lb.	1c.
Ingots, blooms, slabs, shafting, castings valued at 4c. per lb. ....per lb.	45 p.c. a.v.
at 1c. or less	4-10c.
1c. and not above 1 4-10c.	½c.
1 4-10c. and not above 1 8-10c.	8-10c.
1 8-10c. and not above 2 2-10c.	9-10c.
2 2-10c. and not above 3c.	1 2-10c.
above 3c. and not above 4c.	1 6-10c.
above 4c. and not above 7c.	2c.
above 7c. and not above 10c.	2 8-10c.
above 10c. and not above 13c.	3½c.
above 13c. and not above 16c.	4 2-10c.
above 16c.	7c.
Wire rods, not smaller than No. 6 wire gauge	6 10c.
Wire not smaller than No. 10 wire gauge	1½c.
Smaller than No. 10, not smaller than No. 16 ..	1½c.
Smaller than No. 16, not smaller than No. 26 ..	2½c.
Smaller than No. 26	3c.
Any of the above covered with cotton, silk, &c., corset wire (in addition) .....per lb.	5c.
Flat steel wire.....	50 p.c., a.v.
Iron or steel wire coated with zinc or tin (except fence wire), in addition to the wire .....per lb.	½c.
Iron wire rope, or wire strand, in addition to rate on wire .....per lb.	1c.
Steel wire rope, strand, or cloth, in addition to rate on wire .....per lb.	2c.
All iron or steel wire valued at more than 4c. per lb.....	45 p.c., a.v.
Card wire for clothing	35 p.c., a.v.
Anchors, mill irons, engine forgings weighing 25 lbs. or more .....per lb.	1 8-10c.
Axles and axle bars	2c.
Anvils	2½c.
Sledge hammers, wedges, and crowbars.....	2½c.
Boiler tubes.....	2½c.
Bolts and hinges.....	2½c.
Card clothing made of tempered steel wire, per square foot	50c.
All others.....	25c.
Cast iron pipe .....per lb.	9-10c.
Stove plates, sad irons, tailors' irons	1 2-10c.
Castings of malleable iron	1½c.
Cast hollow ware	3c.
Chains made of iron or steel not less than ¾ in. in diameter .....per lb.	1 6-10c.
Less than ¾, not less than ⅝	1 8-10c.
Less than ⅝	2½c.
No chain shall pay less than 45 p.c., a.v.	
Penknives, valued not more than 50c. per dozen, per dozen	50 p.c., a.v., & 12c.
50c. to \$1 50 per dozen	50 p.c., a.v., & 50c.
\$1 50 \$3 per dozen	50 p.c., a.v., & \$1
More than \$3 per dozen	50 p.c., a.v., & \$2

Razors, less than \$4 per dozen	„	30 p.c., a.v., & \$1
\$4 or more per dozen	„	30 p.c., a.v., & \$1 75
Swords and side arms	„	35 p.c., a.v.
Table knives, forks, butchers', kitchen, and artists' knives, not more than \$1 per dozen	per dozen	30 p.c., a.v., & 10c.
\$1 to \$2, per dozen	„	30 p.c., a.v., & 35c.
\$2 to \$3, per dozen	„	30 p.c., a.v., & 40c.
\$3 to \$8, per dozen	„	30 p.c., a.v., & \$1
More than \$8 per dozen	„	30 p.c., a.v., & \$2
Carving and cooks' knives and forks valued at not more than \$4 per dozen	per dozen	30 p.c., a.v., & \$1
\$4 to \$8, per dozen	„	30 p.c., a.v., & \$2
\$8 to \$12, per dozen	„	30 p.c., a.v., & \$3
More than \$12, per dozen	„	30 p.c., a.v., & \$5
Files, 4 inches long and under	per dozen	35c.
4 to 9 inches, per dozen	„	75c.
9 to 14 inches, per dozen	„	\$1 30c.
14 inches and over, per dozen	„	\$2

Firearms.

Muskets and sporting rifles	25 p.c., a.v.
Shot guns, double barrellled, value not more than \$6 ..each	35 p.c., a.v., & \$1 50c.
\$6 to \$12	„ 35 p.c., a.v., & \$4
More than \$12	„ 35 p.c., a.v., & \$6
Single barrel	„ 35 p.c., a.v., & \$1
Revolving pistols, worth not more than \$1 50c.	„ 35 p.c., a.v., & 40c.
Valued at more than \$1 50c	„ 35 p.c., a.v., & \$1
Iron or steel sheets, plates or articles enamelled or glazed with vitreous glasses	45 p.c., a.v.
As above, with more than one colour or ornamented ..	50 p.c., a.v.

Nails, Spikes, Tacks, and Needles.

Cut nails and spikes, iron or steel	per lb.	1c.
Horseshoe, hob, wrought iron or steel	„	4c.
Wire nails, wrought iron or steel, 2 inches long, not lighter than No. 12 gauge	per lb.	2c.
1 inch to 2 inches, lighter than No. 12 and not lighter than No. 16 wire gauge	per lb.	2½c.
Shorter than 1 inch, lighter than No. 16 gauge... ..	„	4c.
Spikes, nuts, washers, horse, or ox shoes		1 8-10c.
Cut tacks, brads, sprigs, not exceeding 16 ounces to the 1,000	per 1,000	2½c.
Exceeding 16 ounces	„	2½c.
Needles for knitting or sewing machines, crochet tape, bodkins		35 p.c., a.v.
Knitting, and all not specially provided for		25 p.c., a.v.

Plates.

Steel plates, stereotype, electrotpe, engraved or lithographed	25 p.c., a.v.
Railway fish plates or splice bars	per lb. 1c.
Rivets, iron or steel	„ 2½c.
Saws, cross cut	per lineal foot 8c.
Mill, pit and drag saws, not over 9 in. wide, ..	„ 10c.
Over 9 in.	„ 15c.
Circular saws	30 p.c., a.v.
Hand, back and all other saws	40 p.c., a.v
Wood screws, over 2 in. long.....	per lb. 5c.
1 in. to 2 in.	„ 7c.
½ in. to 1 in.	„ 10c
¾ in. and less	„ 14c.
Wheels or parts thereof, for railway purposes, of iron or steel, and steel tired, wholly or partially finished or manufactured	per lb. 2½c
Axles and wheels dutiable as wheels.	
Ingots, cogged ingots or blanks for same	„ 1½c.

Miscellaneous Metals and Manufactures.

Aluminum, crude and alloys	per lb.	15c.
Antimony, regulus or metal	„	½c.

Argentine albata or German silver	25 p.c., a.v.
Brass bars or pigs, old brass, yellow metal fit only for re-manufacture	1½c.
Bronze powder	12c.
Bronze or Dutch metal in leaf	8c.
Copper.	
Copper ores, on each pound of fine copper	7½c.
Old copper for re-manufacture.....	1c.
Regulus of copper and copper cement.....	1c.
Copper in plates, bars or ingots, not manufactured..	1½c.
Copper in rolled plates, rods, pipes, sheathing.....	35 p.c., a.v.
Gold and Silver.	
Bullions and metal thread	30 p.c., a.v.
Gold leaf	\$2
Silver leaf.....	75c.
Lead.	
Lead ore and lead dross	1½c.
Provided that silver ore and all other ores containing lead shall pay a duty of 1½c. per lb. on lead therein.	
In pigs and bars, molten and refuse.....	2c.
In sheets, pipes, shot	2½c.
Metallic mineral substances, metals unwrought, not specially provided for	20 p.c., a.v.
Mica	35 p.c., a.v.
Nickel.	
Nickel, nickel oxide alloy	10c.
Pens, metallic, except gold.....	12c.
Penholder tips, holders, gold pens	30 p.c., a.v.
Pins, metallic, including hair-pins, safety-pins, and hat, bonnet, shawl, and belt-pins	30 p.c., a.v.
Quicksilver	10c.
The flasks, bottles, or other vessels in which quicksilver is imported shall be subject to the same rate of duty as they would be subjected to if imported empty.	
Type metal	1½c.
New types	25 p.c., a.v.
Tin, black oxide, bar, block and pig, on and after January 1, 1893	4c.
Watches.	
Chronometers, box or ships.....	10 p.c., a.v.
Watches, cases, movement, glasses	25 p.c., a.v.
Zinc or Spelter.	
Zinc, in blocks or pigs	1½c.
In sheet	2½c.
Old, for re-manufacture	1½c.
Manufactures or wares not specially provided for, wholly or in part of metal	45 p.c., a.v.

SCHEDULE D.—WOOD AND MANUFACTURES OF.

Timber hewn and sawed	10 p.c., a.v.
Squared or sided	½c.
Sawed boards, deals of hemlock, white wood, sycamore, white pine and basswood	\$1
Sawed lumber, not provided for	\$2
Sawed lumber, if planed, for each side so planed ..	50c.
If planed, tongued and grooved	\$1
If planed on two sides, tongued and grooved ..	\$1 50c.
Cedar posts, ties, telegraph poles (after March 1, 1891)	20 p.c., a.v.
Sawed cedar, lignum vitæ, lancewood, ebony, box, granadilla, mahogany, rosewood, satinwood, and all cabinet woods	15 p.c., a.v.
Veneers, manufactured.....	20 p.c., a.v.
Pine clapboards.....	\$1
Spruce clapboards	\$1 50c.
Hubs, car blocks, gun blocks, all like blocks, rough hewn or sawed only	20 p.c., a.v.

provided further, that all machinery purchased abroad and erected in a beet sugar factory and used in the production of raw sugar in the United States from beets produced therein shall be admitted duty free until the 1st day of July, 1892. Provided, that any duty collected on any of the above described machinery purchased abroad and imported into the United States for the uses above indicated since January 1, 1890, shall be refunded.

Sugar candy and all confectionery, including chocolate confectionery, made wholly or in part of sugar, valued at twelve cents or less per pound, and on sugars after being refined, when tintured, coloured, or in any way adulterated, five cents per pound.

All other confectionery, including chocolate confectionery, not specially provided for in this Act, 50 p.c., a.v.

Glucose, or grape sugar, three-fourths of one cent. per pound.

Maple syrup, twenty cents per gallon.

That the provisions of the free list providing terms for the admission of imported sugars and molasses and for the payment of a bounty on sugars of domestic production shall take effect on April 1, 1891; provided that, on and after March 1, 1891, and prior to April 1, 1891, sugar not exceeding No. 16 Dutch standard in colour may be refined in bond without payment of duty; and such refined sugars may be transported in bond and stored in bonded warehouses at such points of destination as are provided in existing laws relating to the immediate transportation of dutiable goods in bond, under such rules and regulations as shall be prescribed by the Secretary of the Treasury.

SCHEDULE F.—TOBACCO AND MANUFACTURES OF.

Leaf for Cigar Wrappers if not stemmed	per lb.	\$2
If stemmed	"	\$2 75c.
All other tobacco leaf not stemmed	"	35c.
Stemmed	"	50c.
Tobacco manufactured.....	"	40c.
Snuff and snuff flower	"	50c.
Cigars, cigarettes, and cheroots	"	\$4 50c., & 25 p.c., a.v

SCHEDULE G.—AGRICULTURAL PRODUCTS AND PROVISIONS.

Animals, Alive.

Horses and mules	per head	\$30
Horses valued over \$150		30 p.c., a.v.
Cattle over one year	per head	\$10
Less than one year	"	\$2
Hogs	"	\$1 50c.
Sheep, one year old and upwards	"	\$1 50c.
Less than one year old	"	75c.
All other live animals		20 p.c., a.v.

Breadstuffs and other Farinaceous Substances.

Barley.....	per bushel of 48 lbs.	30
Barley Malt	per bushel of 34lbs.	45c.
Barley, pearled, patent or hulled	per lb.	2c.
Buckwheat	per bushel of 48 lbs.	15c.
Corn or maize	per bushel of 56 lbs.	15c.
Cornmeal.....	per bushel of 48 lbs.	20c.
Macaroni, vermicelli.....	per lb.	2c.
Oats.....	per bushel	15c.
Oatmeal	per lb.	1c.
Rice, cleaned	"	2c.
Uncleaned	"	1½c.
Paddy	"	½c.
Rice flour, meal and broken	per lb.	½c.
Rye.....	per bushel	10c.
Rye flour	per lb.	½c.
Wheat	per bushel	25c.
Wheat flour		25 p.c., a.v.

Dairy Products.

Butter and substitutes	per lb.	6c.
Cheese		6c.
Milk, fresh	per gallon	5c.
Preserved or condensed, including weight of packages	per lb.	3c.
Sugar of Milk.....	"	8c.

Farm and Field Products.

Beans	per bushel of 60 lbs.	40c.
Beans, peas, and mushrooms		40 p.c., a.v.
Broom corn.....	per ton	\$8
Cabbages.....	each	3c.
Cider	per gallon	5c.
Eggs	per dozen	5c.
Yolk		25 p.c., a.v.
Hay	per ton	\$4
Honey	per gallon	20c.
Hops.....	per lb.	15c.
Onions	per bushel	40c.
Peas, green	per bushel of 60 lbs.	40c.
Dried	per bushel	20c.
Split	"	50c.
In papers or small packages	per lb.	1c
Plants, trees, shrubs, and vines.....		20 p.c., a.v.
Potatoes	per bushel of 60 lbs.	25c.

Seeds.

Castor beans or seeds.....	per bushel of 50 lbs.	50c.
Flaxseed, linseed, poppy seed, oil seed	" 56 "	30c.
Garden seeds		20 p.c., a.v.
Vegetables, prepared or preserved, including pickles and sauces of all kinds		45 p.c., a.v.
In natural state		25 p.c., a.v.
Straw.....		30 p.c., a.v.
Teazles		30 p.c., a.v.

Fish.

Anchovies and sardines in tin boxes, 5 inches by 4 and 3½ inches deep	per box	10c.
In half boxes, not more than 5 inches by 4 and 1½ inches deep	per box	5c.
In quarter boxes, not more than 4½ inches by 3½ and 1½ inches deep	per box	2½c.
In any other form		40 p.c., a.v.
Fish, pickled, mackerel or salmon, pickled or salted..	per lb.	1c.
Fresh, smoked, dried, or frozen.....	"	½c.
Not otherwise provided for.....	"	½c.
Herrings, pickled or salted.....	"	½c.
Fresh.....	"	½c.
Fish, packed in cans or packages		30 p.c., a.v.
Shellfish, in cans not exceeding 1 quart, per doz. cans		8c.
Exceeding one quart (in addition) per dozen for each half quart or fraction		4c.
(Provided that until June 30, 1891, such cans shall be admitted as now provided by law). (See "Year Book," 1890.)		

Fruits and Nuts—Fruits.

Apples, per bushel		25c.
Dried, desiccated, prepared.....	per lb.	2c.
Grapes, per barrel of 3 cu. feet		60c
Plums and prunes	per lb.	2c.
Figs	"	2½c.
Oranges, lemons, limes, in pkgs. of 1½ cu. feet or less, per pkg.		13c.
1½ to 2½ cu. ft., per pkg.		25c.
2½ to 5 cu. ft., per pkg.		50c.
Over 5 cu. ft., for every additional cu. ft. or fraction ..		10c.
Oranges in bulk, per thousand		\$1 50c.
Lemons and limes in bulk, per thousand.....		\$1 50c.
Boxes or barrels containing such oranges, lemons, or limes		30 p.c., a.v.
Raisins	per lb.	2½c.
Comfits, sweetmeats, and fruits preserved, jellies		35 p.c., a.v.
Fruits preserved in their own juices		30 p.c., a.v.
Orange peel and lemon peel, preserved or candied ..	per lb.	2c.

Nuts.

Almonds, not shelled.....per lb.	5c.
Shelled	7½c.
Filberts and Walnuts, not shelled..... "	3c.
Shelled	6c.
Peanuts, unshelled..... "	1c.
Shelled	1½c.
Nuts not specially provided for..... "	1½c.

Meat Products.

Bacon and hams..... "	5c.
Beef, mutton, and pork	2c.
Meat not specially provided for	25 p.c., a.v.
Extract of, not specially provided for	35c.
Extract, fluid	15c.
Lard	2c.
Poultry, live	3c.
Dressed	5c.
Tallow	1c.
Wool grease, including degreas	¼c.

Miscellaneous Products.

Chicory root, prepared	2c.
Chocolate (other than chocolate confectionery and chocolate commercially known as sweetened chocolate).....per lb.	2c.
Cocoa, prepared or manufactured..... "	2c.
Cocoa butter	3½c.
Dandelion root and acorns, substitutes for coffee.... "	1½c.

Salt.

Salt, in packages	12c.
In bulk..... "	8c.

(Provided that imported salt may be used in curing fish and the duties be remitted, and further provided that exporters of meat may use imported salt and have duties refunded in amounts not less than \$100.)

Starch, and substances fit for use as.....per lb.	2c.
Dextrine, burnt starch, gum substitute	¼c.
Mustard, ground or preserved	10c.
Spices	4c.
Cayenne pepper, unground..... "	2½c.
Sage	3c.
Vinegar	7½c.

There shall be allowed on the imported tin-plate used in the manufacture of cans, boxes, packages, and all other articles of tinware exported, either empty or filled with domestic products, a drawback equal to the duty paid on such tin-plate, less one per cent. of such duty, which shall be retained for the use of the United States.

SCHEDULE H.—SPIRITS, WINES AND OTHER BEVERAGES.**Spirits.**

Anhydrous alcohol..... per gallon	\$2 50c.
Brandy and spirits distilled..... "	2 50c.

Each and every gauge or wine gallon of measurement shall be counted as at least one proof gallon, and the standard for determining the proof of brandy and other spirits or liquors of any kind imported shall be the same as that which is defined in the laws relating to internal revenue, but any brandy or other spirituous liquors, imported in casks of less than fourteen gallons, shall be forfeited to the United States, provided, that it shall be lawful for the Secretary of the Treasury to authorize the ascertainment of the proof of wines, cordials or other liquors, by distillation or otherwise, in case where it is impracticable to ascertain such proof by the means prescribed by existing law or regulations.

On all compounds or preparations of which distilled spirits are a component part of chief value, not specially provided for in this Act, there shall be levied a duty not less than that imposed upon distilled spirits.

Cordials, liquors, arrack, absinthe, kirchwasser, ratafia and other spirituous beverages or bitters of all kinds containing spirits, per gallon, \$2 50c.

No lower rate or amount of duty shall be levied, collected and paid on brandy, spirits and other spirituous beverages than that fixed by law for the description of first proof; but it shall be increased in proportion for any greater strength

than the strength of the first proof, and all imitations of brandy or spirits or wines imported by any names whatever, shall be subject to the highest rate of duty provided for the genuine articles respectively intended to be represented, and in no case less than \$1 50c. per gallon.

Bay rum or bay water of first proof and in proportion for any greater strength than first proof, per gallon, \$1 50c.

Wines.

Champagnes and sparkling wines in bottles over one pint to one quart	per dozen	\$8
Over one-half pint to 1 pint	"	\$4
One-half pint or less	"	\$2
More than 1 quart, in addition, on quantity in excess,	per gallon	\$2 50c.
Still wines, including ginger wine or ginger cordial and vermouth, in casks	per gallon	50c.
Still wines in bottles, per case of 1 dozen quarts or 2 dozen half quarts		\$1 60c.
Any excess found on such excess	per pint	5c.

Provided that any wines, ginger cordial, or vermouth imported containing more than 24 per cent. of alcohol shall be forfeited to the United States; and provided further that there shall be no constructive or other allowance for breakage, leakage, or damage on wines, liquors, cordials, or distilled spirits. Wines, cordials, brandy, and other spirituous liquors imported in bottles or jugs shall be packed in packages containing not less than one dozen bottles or jugs in each package; and all such bottles or jugs shall pay an additional duty of three cents for each bottle or jug unless specially provided for in this Act, but no separate or additional duty shall be assessed on the bottles or jugs.

Ale, porter, and beer, in bottles or jugs	per gallon	40c.
Otherwise than bottles and jugs	"	20c.
Malt extract, fluid, in casks	"	20c.
In bottles or jugs	"	40c.
Solid or condensed		40 p.c., a.v.
Cherry juice, prune wine, fruit juice, not containing more than 18 p.c. of alcohol	per gallon	60c.
More than 18 p.c. of alcohol	per proof gallon	\$2 50c.
Ginger ale, in plain $\frac{1}{2}$ pint bottles	per dozen	13c.
Lemonade and other artificial waters, in same ..	"	13c.
Ginger ale, in $\frac{1}{4}$ to $1\frac{1}{2}$ pint bottles	"	26c.
Lemonade, &c., in same	"	26c.
Ginger ale, otherwise than in plain bottles or more than $1\frac{1}{2}$ pint bottles	per gallon	50c.
Lemonade, same	"	50c.
Mineral waters in pint bottles	per dozen	16c.
1 pint to 1 quart	"	25c.
Over 1 quart	per gallon	20c.

(In addition thereto duty shall be collected on all above bottles at rates chargeable if imported empty.)

SCHEDULE I.—COTTON MANUFACTURES.

Cotton thread, yarn, warps, single or twisted, except spool cotton, valued at not exceeding 25c.	per lb	10c.
25c. to 40c.	"	18c.
40c. to 50c.	"	23c.
50c. to 60c.	"	28c.
60c. to 70c.	"	33c.
70c. to 80c.	"	38c.
80c. to \$1	"	48c.
Over \$1		50 p.c., a.v.
Spool thread, not over 100 yards to spool, per dozen spools		7c.
Over 100 yards, for each additional 100 yards or fraction	per dozen spools	7c.
Cotton cloth not bleached or coloured and not exceeding 50 threads to the square inch	per square yard	2c.
If bleached	"	2½c.
If dyed, coloured, or printed	"	4c.
Cotton cloth, not bleached or coloured, not exceeding 100 threads to square inch	per square yard	2½c.
If bleached	"	3c.
If dyed, coloured, or printed	"	4c.

Provided, that on all cotton cloth not exceeding one hundred threads to the square inch, counting the warp and filling, not bleached, dyed, coloured, stained, painted, or printed, valued at over six and one-half cents per square yard; bleached, valued at over nine cents per square yard; and dyed, coloured, stained, painted, or printed, valued at over twelve cents per square yard, there shall be levied, collected, and paid a duty of thirty-five per cent. a.v.

Cotton cloth, not bleached or coloured, 100 to 150 threads to square inch	per square yard	3c.
If bleached	"	4c.
If dyed, coloured or printed	"	5c.

Provided, that on all cotton cloth exceeding 100 and not exceeding 150 threads to the square inch, counting the warp and filling, not bleached, dyed, coloured, stained, painted, or printed, valued at over 7½ cents per square yard; bleached, valued at over 10 cents per square yard; dyed, coloured, stained, painted, or printed, valued at over 12½ cents per square yard, their shall be levied, collected, and paid a duty of 40 per cent., a.v.

Cotton cloth, not bleached or coloured, 150 to 200 threads to square inch	per square yard	3½c.
If bleached	"	4½c.
If dyed, coloured or printed	"	5½c.

Provided, that on all cotton cloth exceeding 150 and not exceeding 200 threads to the square inch, counting the warp and filling, not bleached, dyed, coloured, stained, painted, or printed, valued at over 8 cents per square yard; bleached, valued at over 10 cents per square yard; dyed, coloured, stained, painted, or printed, valued at over 12 cents per square yard, there shall be levied, collected, and paid a duty of 45 per cent., a.v.

Cotton cloth, not bleached or coloured, exceeding 200 threads to square inch	per square yard	4½c.
If bleached	"	5½c.
If dyed, coloured, or printed	"	6½c.

Provided, that on all such cotton cloths not bleached, dyed, coloured, stained, painted, or printed, valued at over ten cents per square yard; bleached, valued at over twelve cents per square yard, and dyed, coloured, stained, painted, or printed, valued at over fifteen cents per square yard, there shall be levied, collected and paid a duty of forty-five per cent. a.v. : Provided further, that on cotton cloth, bleached, dyed, coloured, stained, painted, or printed, containing an admixture of silk, and not otherwise provided for, there shall be levied, collected and paid a duty of ten cents per square yard and in addition thereto thirty-five per cent. a.v.

Clothing, ready made, handkerchiefs, of cotton, neckties, made up

Not specially provided for 50 p.c., a.v.

Provided, that all such clothing ready made and articles of wearing apparel having india rubber as a component material (not including gloves or elastic articles that are specially provided for in this Act) shall be subject to a duty of fifty cents per lb., and in addition thereto fifty per cent. a.v.

Plushes, velveteens, corduroys, pile fabrics, not bleached or coloured, per square yard	10c. & 20 p.c., a.v.
If bleached, per square yard	12c. & 8 p.c., a.v.
If dyed, coloured, or printed	14c. & 20 p.c., a.v.

But none of the foregoing articles shall pay less than 40 p.c., a.v.

Chenille curtains, table covers, &c.	60 p.c., a.v.
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Stockings, hose, and half hose, made on knitting machines or frames, of cotton or vegetable fibre, and shirts and drawers of cotton, valued at not more than \$1.50 per doz.	35 p.c., a.v.
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Stockings shaped by knitting machines or frames, or knit by hand, valued at not more than 60c. per dozen pairs,	
per doz.	20c. & 20 p.c., a.v.

Value 60c. to \$2	"	50c. & 30 p.c., a.v.
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Value over \$2 and not more than \$4 per doz. pairs,,	75c. & 40 p.c., a.v.
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Valued at over \$4 per doz., per doz.....	\$1. 1c. 40 p.c., a.v.
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Shirts and drawers valued at \$1.50 to \$3 per dozen, per doz.	\$1 & 35 p.c., a.v.
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Value \$3 to \$5 per doz.	\$1 25c. & 40 p.c., a.v.
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Value \$5 to \$7	\$1 50c. & 40 p.c., a.v.
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Value over \$7 ..	\$2 & 40 p.c., a.v.
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Cotton cords, braids; boot, shoe, and corset lacings, per lb.	35c.
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Gimps, webbing, goring, suspenders, braces	40 p.c., a.v.
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(Provided that none of these articles shall pay a less rate than 40 p.c., a.v.)

Cotton damask	40 p.c., a.v.
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Manufactures of cotton not specially provided for	40 p.c., a.v.
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SCHEDULE J.—FLAX, HEMP, AND JUTE, AND MANUFACTURES OF.

Flax straw, per ton.....	\$5
Not hackled or dressed.....per lb.	1c.
Hackled, "dressed line"....."	3c.
Tow of flax or hemp....."	1c.
Hemp, per ton.....	\$25
Hackled, line of hemp, per ton.....	\$50
Yarn made of jute.....	35 p.c., a.v.
Cables, cordage, twine, except binding twine in whole or in part of istle or Tampico fibre, manila, or sisal grass,.....per lb.	1½c.
Binding twine of Tampico fibre, manila, or sisal grass ..	7-10c.
Cables and cordage of hemp....."	2½c.
Tarred....."	3c.
Hemp and jute carpet and carpetings per square yard	6c.
Burlaps, not exceeding 60 inches wide, flax, jute and hemp, except for cotton bagging.....per lb.	1½c.
Bags for grain, of burlaps....."	2c.
Cotton bagging, valued at 6c. or less per sq. yd. .. per square yard	1 6-10c.
More than 6c. per square yard....."	1 8-10c.
Flax gill-netting, nets, webs, seines, of yarn up to No. 20,.....per lb.	15c. & 35 p.c., a.v.
Finer than No. 20....."	20c. & 45 p.c., a.v.
Linen hydraulic hose....."	20c.
Oilcloth, linoleum, corticene, cork-carpet, and waterproof cloth, valued at 25c. or less per square yard	40 p.c., a.v.
Above 25c. per square yard	15c. & 30 p.c., a.v.
Collars and cuffs of cotton.....per dozen	15c. & 35 p.c., a.v.
Yarns of flax or hemp, or a mixture of either, valued 13c. or less per lb., 6c. per lb.; over 13c. per lb., 45 p.c., a.v. All manufactures of flax or hemp, or of which these substances, or either of them, is the component material of chief value, not specially provided for in this Act, 50 p.c., a.v. Provided, that until Jan. 1, 1894, such manufactures of flax containing more than 100 threads to the sq. in., both warp and filling, shall be subject to a duty of 35 p.c., a.v., in lieu of the duty herein provided	
Collars and cuffs of linen, in whole or part .. per dozen	30c. & 40 p.c., a.v.
Shirts, and all wearing apparel not specially provided for, wholly or in part of linen	50 p.c., a.v.
Laces, edgings, embroideries, ruchings, trimmings, curtains, embroidered and hemstitched handkerchiefs.....	60 p.c., a.v.
<i>Provided</i> , That articles of wearing apparel, and textile fabrics, when embroidered by hand or machinery, and whether specially or otherwise provided for in this Act, shall not pay a less rate of duty than that fixed by the respective paragraphs and schedules of this Act upon embroideries of the materials of which they are respectively composed.	
Manufactures of jute or vegetable fibre—except flax, hemp, cotton—value 5c. per lb.....	2c.
Above 5c. per lb.	40 p.c., a.v.

SCHEDULE K.—WOOL AND MANUFACTURES OF WOOL.

All wools, hair of the camel, goat, alpaca and other like animals shall be divided for the purpose of fixing the duties to be charged thereon into the three following classes:—

Class one, that is to say, merino, mestiza, metz or metis wools or other wools of merino bloods, immediate or remote, down clothing wools and wools of like character with any of the preceding, including such as have been heretofore usually imported into the United States from Buenos Ayres, New Zealand, Australia, Cape of Good Hope, Russia, Great Britain, Canada and elsewhere, and also including all wools not hereinafter described or designated in classes two and three.

Class two, that is to say, Leicester, Cotswold, Lincolnshire, Down combing wools, Canada long wools, or other like combing wools of English blood and usually known by the terms herein used, and also hair of the camel, goat, alpaca and other like animals.

Class three, that is to say, Donskoi, native South American, Cordova, Valparaiso, native Smyrna, Russian camel's hair, and including all such wools of like character as have been heretofore usually imported into the United States from Turkey, Greece, Egypt, Syria and elsewhere, excepting improved wools hereinafter provided for.

The standard samples of all wools which are now or may be hereafter deposited in the principal custom-houses of the United States, under the authority of the Secretary of the Treasury, shall be the standards for the classification of wools under this Act, and the Secretary of the Treasury shall have the authority to renew these standards and to make such additions to them from time to time as may be required, and he shall cause to be deposited like standards in other custom-houses of the United States when they may be needed.

Whenever wools of class 3 shall have been improved by the admixture of merino or English blood from their present character as represented by the standard samples now or hereafter to be deposited in the principal custom-houses of the United States, such improved wools shall be classified for duty, either as class 1 or as class 2, as the case may be.

The duty on wools of the first class which shall be imported washed shall be twice the amount of the duty to which they would be subjected if imported unwashed; and the duty on wools of the first and second classes which shall be imported scoured shall be three times the duty to which they would be subjected if imported unwashed.

Unwashed wools shall be considered such as shall have been shorn from the sheep without any cleansing; that is, in their natural condition. Washed wools shall be considered such as have been washed with water on the sheep's back. Wool washed in any other manner than on the sheep's back shall be considered as scoured wool.

The duty upon wool of the sheep or hair of the camel, goat, alpaca, and other like animals which shall be imported in any other than ordinary condition, or which shall be changed in its character or condition for the purpose of evading the duty, or which shall be reduced in value by the admixture of dirt or any other foreign substance, or which has been sorted or increased in value by the rejection of any part of the original fleece, shall be twice the duty to which it would be otherwise subject, provided that skirted wools as now imported are hereby excepted. Wools on which a duty is assessed amounting to three times or more than that which would be assessed if said wool was imported unwashed, such duty shall not be doubled on account of its being sorted. If any bale or package of wool or hair specified in this Act imported as of any specified class, or claimed by the importer to be dutiable as of any specified class, shall contain any wool or hair subject to a higher rate of duty than the class so specified, the whole bale or package shall be subject to the highest rate of duty chargeable on wool of the class subject to such higher rate of duty, and if any bale or package be claimed by the importer to be shoddy, mungo, flocks, wool, hair, or other material of any class specified in this Act, and such bale contain any admixture of any one or more of said materials, or of any other material, the whole bale or package shall be subject to duty at the highest rate imposed upon any article in said bale or package.

Wools and hair of the first class.....per lb.	11c.
Of the second class	12c.
Of third class, value 13c. per lb. or less	32 p.c., a.v.
Of third class, value over 13c.....	50 p.c., a.v.

Wools on the skin shall pay the same rate as other wools, the quantity and value to be ascertained under such rules as the Secretary of the Treasury may prescribe.

Noils, shoddy waste, and all wastes composed wholly or in part of wool.....per lb.	30c.
Woollen rags, mungo, and flocks	10c.

Wools and hair of the camel, goat, alpaca, or other like animals in the form of roping, roving, or tops, and all wool and hair which have been advanced in any manner or by any process of manufacture beyond the washed or scoured condition, not specially provided for in this Act, shall be subject to the same duties as are imposed upon manufactures of wool not specially provided for in this Act.

On woollen and worsted yarns made wholly or in part of wool, worsted, the hair of the camel, goat, alpaca, or other animals, valued at not more than 30 cents per pound, the duty, per pound, shall be two and one-half times the duty imposed by this Act on a pound of unwashed wool of the first class, and in addition thereto 35 p.c., a.v.; valued at more than 30 cents and not more than 40 cents per pound, the duty per pound shall be three times the duty imposed by this Act on a pound of unwashed wool of the first class, and in addition thereto 35 p.c., a.v.; valued at more than 40 cents per pound the duty shall be three and one-half times the duty imposed by this Act on a pound of unwashed wool of the first class, and in addition thereto 40 p.c., a.v.

On woollen or worsted cloths, shawls, knit fabrics and all fabrics made on knitting machines or frames, and all manufactures of every description made wholly or in part of wool, worsted, the hair of the camel, goat, alpaca, or other animals not specially provided for in this Act valued at not more than 30 cents

or carpeting of like character or description, 60c. per square yard, and in addition thereto 40 p.c., a.v.

Brussels carpets, figured or plain, and all carpets or carpeting of like character or description, 44c. per square yard, and in addition thereto 40 p.c., a.v.

Velvet and tapestry velvet carpets, figured or plain, printed on the warp or otherwise, and all carpets or carpeting of like character or description, 40c. per square yard, and in addition thereto 40 p.c., a.v.

Tapestry Brussels carpets, figured or plain, and all carpets or carpeting of like character or description, printed on the warp or otherwise, 28c. per square yard, and in addition thereto 40 p.c., a.v.

Treble ingrain, three-ply and all chain Venetian carpets, 19c. per square yard, and in addition thereto 40 p.c., a.v.

Wool, Dutch and two-ply ingrain carpets, 14c. per square yard, and in addition thereto 40 p.c., a.v.

Druggets and bookings, printed, coloured or otherwise, 22c. per square yard, and in addition thereto 40 p.c., a.v.

Felt carpeting, figured or plain, 11c. per square yard, and in addition thereto 40 p.c., a.v.

Carpets and carpeting of wool, flax or cotton, or in part of either, not specially provided for in this Act, 50 p.c., a.v.

Mats, rugs, screens, covers, hassocks, bed sides, art squares and other portions of carpets or carpeting made wholly or in part of wool and not specially provided for in this Act shall be subjected to the rate of duty herein imposed on carpets or carpetings of like character or description.

SCHEDULE L.—SILK AND SILK GOODS.

Silk carded or combed	per lb.	50c.
Thrown silk, singles, tram, organzine, sewing silk, twist, floss, silk threads, yarns		30 p.c., a.v.
Spun silk		35 p.c., a.v.
Webbings, gorings, suspenders, braces, braids, buttons, fringes, cords and tassels		50 p.c., a.v.
Laces and embroideries, handkerchiefs, ruchings, knit goods, wearing apparel		60 p.c., a.v.
Clothing and wearing apparel with india-rubber not provided for	per oz.	8c. & 60 p.c., a.v.
Velvets, pile fabrics, less than 75 p.c. in weight of silk	per lb.	\$1 50c. & 15 p.c., a.v.
75 p.c. or more (but in no case less than 50 p.c., a.v.) ..		\$3 50c. & 15 p.c., a.v.
All manufactures of silk not provided for		50 p.c., a.v.

SCHEDULE M.—PULP, PAPERS, AND BOOKS.

Pulp and Paper.

Mechanically ground wood pulp, per ton	dry weight	\$2 50c.
Chemical wood pulp, unbleached, per ton	„	\$6 00c.
Bleached, per ton	„	\$7 00c.
Sheathing paper		10 p.c., a.v.
Printing paper, unsized		15 p.c., a.v.
Sized or glued		20 p.c., a.v.
Copying paper and all tissue paper	per lb.	8c. & 15 p.c., a.v.
Albumenized or sensitized paper	„	35 p.c., a.v.
Photographers' paper, not sensitized	„	35 p.c., a.v.
Surface coated papers, cardboards, lithographic prints, autograph and scrap albums		35 p.c., a.v.

Manufactures of Paper.

Envelopes, per 1,000		25c.
Paper hangings for screens, filtering and letterpress copying, albumenized and sensitized		25 p.c., a.v.
Books, pamphlets, engravings, photographs, etchings, maps, charts, and all printed matter not specially provided for ..		25 p.c., a.v.
Blank books		25 p.c., a.v.
Playing cards	per pack	50c.
Other manufactures of paper		25 p.c., a.v.

SCHEDULE N.—SUNDRIES.

Bristles	per lb.	10c.
Brushes, brooms, feather dusters, and hair pencils in quills..		40 p.c., a.v.
Buttons and Button Forms.		
Button forms, lastings, cloth for buttons		10 p.c., a.v.
Agate buttons		25 p.c., a.v.
Pearl and shell, per line, button measure of 1-40 of one inch, per gross		2½c. & 25 p.c., a.v.
Ivory, vegetable ivory, bone and horn buttons		50 p.c., a.v.
Shoe buttons, value not over 3c. per gross, per gross		1c.
Coal, bituminous and shale, per ton of 28 bushels (80 lb.) ..		75c.
Coal, slack or culm		30c.
Coke		20 p.c., a.v.
Cork bark, in squares or cubes	per lb.	10c.
Corks, manufactured		15c.
Dice, draughts, chessmen, balls, billiard balls		50 p.c., a.v.
Dolls, doll heads, marbles, toys not made of rubber, china, porcelain, parian, bisque, earthen or stone ware		35 p.c., a.v.
Emery grains	per lb.	1c.
Explosive Substances.		
Firecrackers	per lb.	8c.
Fulminates		30 p.c., a.v.
Gunpowder and explosives valued at 20c. or less per lb.....		5c.
Above 20c. per lb.		8c.
Matches, not more than 100 matches to box.....	per gross	10c.
Matches otherwise than above, per thousand.....		1c.
Percussion caps		40 p.c., a.v.
Feathers (birds'), downs, dressed, coloured or manufactured Not dressed		50 p.c., a.v.
Quilts and other manufactures of down		10 p.c., a.v.
Furs.....		50 p.c., a.v.
Glass beads, loose		20 p.c., a.v.
Gun wads		10 p.c., a.v.
Human hair, unmanufactured.....		35 p.c., a.v.
Crinoline cloth	per sq. yard	20 p.c., a.v.
Hair seating	per sq. yard	8c.
Hair curled for beds		30c.
Fur hats		15 p.c., a.v.
		55 p.c., a.v.

Jewellery and Precious Stones.

Jewellery articles not elsewhere provided for	50 p.c., a.v.
Pearls	10 p.c., a.v.
Precious stones cut, but not set	10 p.c., a.v.
If set	25 p.c., a.v.
Imitations of, not set.....	10 p.c., a.v.

Leather and Manufactures of.

Belting and sole leather	10 p.c., a.v.
Calfskins, dressed upper leather, chamois, finished.....	20 p.c., a.v.
Bookbinders' calfskins, kangaroo, sheep, goat, lamb, and kid, finished.....	20 p.c., a.v.
Morocco, unfinished	10 p.c., a.v.
Japanned calfskins.....	30 p.c., a.v.
Leather boots and shoes	25 p.c., a.v.
Pianoforte leather	35 p.c., a.v.

But leather cut into shoe uppers or vamps, or other forms suitable for conversion into manufactured articles, shall be classified as manufactures of leather, and pay duty accordingly.

Gloves of all descriptions, composed wholly or in part of kid or other leather, whether wholly or partly manufactured, shall pay duty at the rates fixed in connection with the following specified kinds thereof, fourteen inches in extreme length when stretched to the full extent, being, in each case, hereby fixed as the standard, and one dozen pairs as the basis, namely:—Ladies' and children's smaschen of said length or under, \$1 75c. per dozen; ladies' and children's lamb of said length or under, \$2 25c. per dozen; ladies' and children's kid of said length or under, \$3 25c. per dozen; ladies' and children's suedes of said length or under, 50 p.c., a.v.; all other ladies' and children's leather gloves, and all men's leather gloves of said length or under, 50 p.c., a.v.; all leather gloves

CONSULAR OFFICERS IN GREAT BRITAIN AND IRELAND. 608

All sugars above number twenty Dutch standard of colour, two cents per pound.

Molasses testing above fifty-six degrees, four cents per gallon.

Sugar drainings and sugar sweepings shall be subject to duty either as molasses or sugar, as the case may be, according to polariscopic test.

On coffee, three cents per pound.

On tea, ten cents per pound.

Hides, raw or uncured, whether dry, salted, or pickled, Angora goat-skins, raw, without the wool, unmanufactured, asses' skins, raw or unmanufactured, and skins, except sheep-skins, with the wool on, one and one-half cents per pound.

CONSULAR OFFICERS OF THE UNITED STATES IN GREAT BRITAIN AND IRELAND.

EXPLANATORY NOTES.—C.G., Consul General; V. & D.C.G., Vice- and Deputy-Consul General; D.C.G., Deputy-Consul General; C., Consul; V. & D.C., Vice and Deputy-Consul; V.C., Vice-Consul; C.A., Consular Agent; V. & D.C.A., Vice- and Deputy-Consul Agent; V.C.A., Vice-Consular Agent.

Place.	Name and Title.
Aberdeen, Scotland	Andrew Murray, C.A.
Athlone, "	John Burgess, C.A.
Ballymena, Ireland	George Ballentine, C.A.
Barnsley, England	Robert D. Maddison, C.A.
Belfast, Ireland	Samuel G. Ruby, C.
"	Ralph O. Ruby, V. & D.C.
Birmingham, England	John Jarrett, C.
"	Frederick M. Burton, V. & D.C.
Bradford, "	John A. Tibbits, C.
"	Thomas L. Renton, V. & D.C.
Brighton, "	H. D. Warne, C.A.
Bristol, "	John D. Delille, C.
"	Frederick Ludlow, V. & D.C.
Cardiff, Wales	Evan R. Jones, C.
"	W. Bruce Lovie, V. & D.C.
Carlisle, "	J. Hewelson Brown, C.A.
Cork, Ireland	John A. Piatt, C.
"	James Wm. Scott, V.C.
Dartmouth, England	George Hingston, C.A.
Derby, "	Charles K. Eddowes, C.A.
Dover, "	Francis W. Prescott, C.A.
Dublin, Ireland	Alexander J. Reid, C.
"	Stephen M. Mackenzie, V.C.
Dunfermline, Scotland	James D. Reid, C.A.
"	James Penman, V.C.A.
Dundee, "	Arthur B. Wood, C.
"	Wm. McIntyre, V. & D.C.
Falmouth, England	Howard Fox, C.
"	G. Henry Fox, V. & D.C.
Galashiels, Scotland	Richard Lees, C.A.
Glasgow, "	Levi W. Brown, C.
"	William Gibson, V.C.
Gloucester, England	Charles E. Porthlock, C.A.
Greenock, Scotland	John Craig, C.A.
Guernsey, England	William Carey, C.A.
Holyhead, "	John Jones, C.A.
Huddersfield, "	William P. Smyth, C.A.
"	David J. Bailey, V. & D.C.A.
Hull, "	Byron G. Daniels, C.
"	Robert H. Micks, V.C.
Jersey, "	Thomas Rensuf, C.A.
Kidderminster, "	James Morton, C.A.
Kirkcaldy, Scotland	Andrew Innes, C.A.
Leeds, England	Francis H. Wigfall, C.
"	William Ward, V. & D.C.
Leicester, "	Joseph B. Haxley, C.A.
Leith, Scotland	Wallace Bruce, C.
"	Hugh C. Peacock, V.C.
Limerick, Ireland	John R. Tinsley, C.A.

Place.	Name and Title.
Liverpool, England	Thomas H. Sherman, C.
" "	William J. Sulis, V. & D.C.
" "	William D. Hunter, V.C.
Llanelli, Wales	William Howell, C.A.
London, England	John C. New, C.G.
" "	Oliver R. Johnson, V. & D.C.G.
" "	E. J. Moffat, D.C.G.
" "	Francis W. Frigout, D.C.G.
Londonderry, Ireland	P. T. Rodgers, C.A.
Lurgan, "	F. W. Magahan, C.A.
Manchester, England	William F. Grinnell, C.
" "	Ernest J. Bridgford, V.C.
" "	Leonard Darbyshire, D.C.
Milford Haven, Wales	Henry Kelway, C.A.
Newcastle, England	Horace C. Pugh, C.
" "	Francis J. Radford, V.C.
Nottingham, "	John L. McKim, C.A.
" "	William C. Cartwright, V.C.A.
Newport, Wales	William E. Heard, C.A.
Old Hartlepool, England	J. Hewelson Brown, C.A.
Plymouth, "	Thomas W. Fox, C.
Portsmouth, "	John Main, C.A.
Redditch, "	H. C. Browning, C.A.
Scilly Isles, "	John Banfield, Jun., C.A.
Sheffield, "	Benjamin Folsom, C.
" "	George A. Branson, V.C.
Sligo, Ireland	John Tigue, C.A.
Southampton, England	Jasper P. Bradley, C.
" "	John H. Cooksey, V.C.
St. Helen's, "	John Hammill, C.A.
Sunderland, "	James Horan, C.A.
Swansea, Wales	J. Aeron Thomas, C.A.
Tunstall, England	William Burgess, C.
" "	John H. Copestake, V. & D.C.
Waterford, Ireland	William H. Farrell,
Weymouth, England	Richard Cox, C.A.
Wolverhampton, England	John Neve, C.A.

PORTS ENTITLED TO HAVE GOODS FORWARDED IMMEDIATELY "IN BOND" FROM OTHER PORTS.

Atlanta, Ga.	Hartford, Conn.	Portsmouth, N.H.
Baltimore, Md.	Indianapolis, Ind.	Port Huron, Mich.
Bath, Me.	Jacksonville, Fla.	Port Townsend, Wash.
Boston, Mass.	Kansas City, Mo.	Ter.
Bridgeport, Conn.	Key West, Fla.	Providence, R.I.
Buffalo, N.Y.	Lincoln, Nebr.	Richmond, Va.
Burlington, Vt.	Louisville, Ky.	Rochester, N.Y.
Charleston, S.C.	Memphis, Tenn.	San Diego, Cal.
Chicago, Ill.	Middletown, Conn.	San Francisco, Cal.
Cincinnati, Ohio	Milwaukee, Wis.	Sault Ste Marie, Mich.
Cleveland, Ohio	Mobile, Ala.	Savannah, Ga.
Columbus, Ohio	Newhaven, Conn.	St. Joseph, Mo.
Denver, Colo.	New Orleans, La.	St. Louis, Mo.
Detroit, Mich.	New York, N.Y.	St. Paul, Minn.
Dubuque, Iowa	Newport News, Va.	Seattle, Wash. Ter.
Duluth, Minn.	Norfolk, Va.	Tacoma, Wash. Ter.
Evansville, Ind.	Omaha, Nebr.	Tampa, Fla.
Galveston, Tex.	Philadelphia, Pa.	Toledo, Ohio
Georgetown, D.C.	Pittsburgh, Pa.	Wilmington, Del.
Grand Rapids, Mich.	Portland, Me.	Wilmington, N.C.
	Portland, Oregon	

TABLE FOR THE REDUCTION OF STERLING MONEY OF GREAT BRITAIN TO UNITED STATES GOLD COIN, UNDER
ACT APPROVED MARCH 3, 1873, FIXING THE VALUE OF THE £ STERLING AT \$4.8665.

£	0	1	2	3	4	5	6	7	8	9
1	4. 8665	53. 5315	58. 398	63. 2645	68. 131	72. 9975	77. 864	82. 7305	87. 597	92. 4635
2	9. 733	102. 1965	107. 063	111. 9295	116. 796	121. 6625	126. 529	131. 3955	136. 262	141. 1285
3	14. 5995	190. 8615	195. 728	200. 5945	205. 461	210. 3275	215. 194	220. 0605	224. 927	229. 7935
4	19. 466	199. 5265	204. 393	209. 2595	214. 126	218. 9925	223. 859	228. 7255	233. 592	238. 4585
5	24. 3325	248. 1915	253. 058	257. 9245	262. 791	267. 6575	272. 524	277. 3905	282. 257	287. 1235
6	29. 199	296. 8565	301. 723	306. 5895	311. 456	316. 3225	321. 189	326. 0555	330. 922	335. 7885
7	34. 0655	345. 5215	350. 388	355. 2545	360. 121	364. 9875	369. 854	374. 7205	379. 587	384. 4535
8	38. 932	394. 1865	399. 053	403. 9195	408. 786	413. 6525	418. 519	423. 3855	428. 252	433. 1185
9	43. 7985	442. 8515	447. 718	452. 5845	457. 451	462. 3175	467. 184	472. 0505	476. 917	481. 7835

Note.—Take the figures in the left hand column, and follow the line of figures until you reach the column at the head of which stands the second figure required. *Example.*—£1 left-hand column = \$4.8665. To reduce £10 to American money, remove the decimal point—\$48.66. £26 = \$126.52; £99 = \$481.783.

TABLE FOR REDUCING UNITED STATES MONEY INTO STERLING, UPON THE BASIS OF £ = \$4.8665.

\$	£ s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
25c.	0 1 0.34	10,000.	2 1 1.82	100,000.	20 5 9.13	1,000,000.	205 9 8.75	10,000,000.	20,548 13 0
1.	0 4 1.38	50,000.	10 5 9.13	500,000.	102 17 7.35	5,000,000.	102 17 7.35	50,000,000.	10,217 9 8
2.	0 8 2.76	100,000.	20 11 6.27	1,000,000.	205 9 8.75	5,000,000.	102 17 7.35	50,000,000.	10,217 9 8
3.	0 12 4.14	250,000.	50 11 6.27	2,500,000.	205 9 8.75	10,000,000.	205 9 8.75	50,000,000.	10,217 9 8
4.	0 16 5.53	500,000.	102 17 7.35	5,000,000.	102 17 7.35	10,000,000.	102 17 7.35	50,000,000.	10,217 9 8

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For CHARGES in any Home or Foreign Port, see PORT DIRECTORY.

For TARIFFS of various countries see TARIFFS, British, Colonial, and Foreign, with dutiable articles alphabetically arranged. The American, Canadian, Gold Coast Colony, Victoria, and New Guinea Tariffs will be found in separate sections.

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The **NORTHUMBERLAND DOCK**, 1,200 yards above the Albert Edward Dock Entrance, is the chief outlet for the Coalfields of Northumberland. It contains **16 Staiths** at which upwards of 2,680,000 tons of Coal have been shipped in twelve months.

Powerful **Steam Cranes**, capable of landing and shipping general Cargoes with the utmost despatch, and spacious **Brick Warehouses** for the Storage of Esparto, Hemp, Grain, Guano, Oil Cake, Chemicals, and damageable Goods of all kinds are provided.

Water Area of Dock, 55 acres ; Tidal Basin, 2½ acres ; Tidal Entrance, 70 feet wide ; Lock 250 feet long and 52 feet wide ; Depth of Water on Sills at High Water Spring Tides, 24 feet ; at High Water Neap Tides, 20 feet.

Inside the Dock there are Jetties, with a Wharf behind 450 feet long by 100 feet broad.

Outside the Dock there is a River-side Quay, 1,100 feet long and 144 feet broad, having a depth of water alongside of 18 feet at Low Water Ordinary Spring Tides.

At the Commissioners' **RIVER STAITHS** (between Albert Edward and Northumberland Docks) the largest class of Steamers and Sailing Ships, requiring to load Coal and Coke without entering the Docks, can take in a full cargo and proceed direct to Sea at all times of tide.

The above Docks and Staiths have direct railway communication with the **Coalfields** of Northumberland and Durham, and with all parts of the Kingdom.

They are within twelve minutes' walk from Percy Main and North Shields Stations, on the Tynemouth Branch of the North Eastern Railway. The Tyne General Ferry Company's Steamers, running between Newcastle and Tynemouth, call every half hour at the Northumberland Dock Landing, close to the Dock Offices, and the Commissioners' Steam Ferry plies every quarter of-an-hour between South Shields and Whitehill Point Landing, situated between the two Docks.

PENARTH DOCK AND HARBOUR.

PORT OF CARDIFF.

DOCK ACCOMMODATION.

DOCK.

Length.	Width.	Area.	Length of Lock.	Width of Entrance.	Depth of Water Ordinary Spring Tides.	Depth of Water Neap Tides.
Feet. 2,900	Feet. 370	Acres. 23	Feet. 270	Feet. 60	Feet. 35	Feet. 25

BASIN.

Length.	Width.	Area.	Width of Entrance.	Depth of Water Ordinary Spring Tides.	Depth of Water Neap Tides.
Feet. 400	Feet. 330	Acres. 3	Feet. 60	Feet. 35	Feet. 25

Being a Tidal Dock, the gates can be all thrown open at high water from Sea to Dock for the ingress or egress of Shipping, thereby avoiding the great delay usually caused at other Docks by locking through.

There are fourteen coal tips in the Dock, and two in the basin for steamers of the largest dimensions. All the fourteen tips are on the high level; each is capable of shipping 150 tons per hour. The tips appropriated to large steamers are capable of shipping 300 tons per hour. Every provision has been made for shipping coal with the least possible breakage, with the greatest despatch, and at the minimum charge. There are sufficient cranes worked by hydraulic power for the discharge of ballast, iron ore, &c.; the same power is applied to the opening and closing of the dock gates, and for other purposes applicable to affording convenience and facilities in working the Dock, also in discharging, loading, and despatching vessels.

In addition to these considerations, it may be stated that from the depth of water in this Dock it is able to accommodate the largest class of ships.

PENARTH TIDAL HARBOUR.

Length, measuring along the centre of the river	feet. 13,000
Frontage of Cardiff side, belonging to the Penarth Dock, Harbour and Railway Company	12,000
Frontage on Penarth side, belonging to the Penarth Dock, Harbour and Railway Company	3,000
Total	15,000

Average width at Water Line at High Water for the first reach of the river, 600 feet; length, 4,000; area, 55 acres.

Average width at Water Line in the same reach when the depth of Water is 15 feet, 280 feet; area, 26 acres.

Number of staiths for the shipment of coal, 10; room for 6 more. Each staith is capable of shipping 150 tons per hour.

Depth of Water in the Berths at High Water, ordinary spring tides, 30 feet. Depth of Water in the Berths at High Water, ordinary neap tides, 20 feet. Vessels up to 800 tons burthen take the ground, and are loaded with safety and despatch in this Harbour.

The maximum run of the tide is at the rate of about 2 knots per hour. Three Cranes for unloading Ballast and Iron Ore, each capable of unloading 50 tons per hour.

GENERAL INFORMATION.—This Dock and Harbour are, by the Taff Vale Railway and Rhymney Railway, in direct communication with the extensive coal fields of Glamorganshire and Monmouthshire, whence coals may be conveyed direct to this place of shipment. Communication by London and North Western, Great Western, and Midland Railways, is also afforded to all parts of the kingdom. Special arrangements have been made for the conveyance, from Liverpool and other large depots, of ships' stores which can be taken on the same trucks throughout, and direct to the ship's side.

Regular communication is established by Railway Steamers and Omnibuses between Cardiff Docks, the town of Cardiff, and Penarth Dock and Harbour.

Telegrams may be sent from the Penarth Dock and Harbour to all parts of the Kingdom.

Further information may be obtained from the Secretary of the Taff Vale Railway Company, Cardiff or of the Collector at the Offices, Penarth Dock Head.

Dock Master .. WALTER MURRAY FENGELLEY,) Offices at Penarth
Supt. and Collector JAMES EDWARDS.) Dock Head.

FELIXSTOWE DOCK AND RAILWAY

Felixstowe Tidal Dock, HARWICH HARBOUR.

This Dock is on the East side, about a mile in a Northerly direction above Landguard Fort.

VESSELS HAVE CONSTANT ACCESS AND LIE AFLOAT.

The South Quay is 600 feet long, and Steam Cranes discharge the Cargo direct into the Railway Wagons for conveyance to all parts of Great Britain, or to the Warehouses for Storage.

An Extensive Area of Ground is available for Storing Timber, Deals, and other similar Goods.

The Company undertakes to Discharge or Load vessels entering the Dock; also the Warehousing or Storage, and Delivery of Cargoes.

COAL AND FRESH WATER SUPPLIED.

Information as to Railway Rates, Charges, &c., may be obtained from

J. BUCKNALL COOPER,
Secretary and Manager.

Offices: FELIXSTOWE, SUFFOLK.

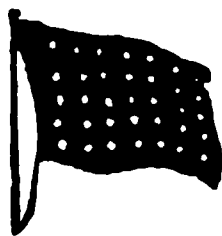
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The PIER HOTEL and RAILWAY STATION adjoin the DOCK.

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REGULAR WEEKLY SAILINGS, FIRST-CLASS FREIGHT STEAMERS.

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Montana	- - 4,200	Michigan	- - 5,500
Maine	- - 4,100	Mississippi	- - 5,500
Missouri	- - 4,200	Massachusetts	- 5,500

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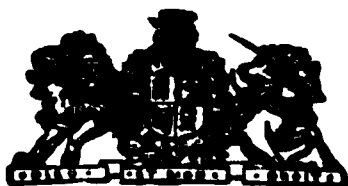
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12 Prize Medals, Three Certificates of Honourable Mention, Two Special Prizes awarded to E. Martin for Inventions and Superiority of Workmanship.

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*Extract from Official Reports on Martin's Patent Lamps by Captain Wilson,
principal Officer of the Board of Trade.*

" WHITEHALL.

" It must be admitted that by a very simple and inexpensive contrivance, the
" Patentee has accomplished what he claims for it, viz. :—

" It cannot be blown out by the wind or put out by water, and is so con-
" structed that the lenses will always keep cool.

" (Signed) CHARLES P. WILSON,

" 3rd February, 1885."

" Principal Officer.

" These Lamps appear to be exceptionally well suited for large or small craft
" such as Coasters and Fishing Vessels that usually carry their lights near the
" water, as they are not liable to be blown or jerked out by the quick motion of
" such craft, neither would the lenses be damaged, or the light affected by sprays
" or seas going over them.

" (Signed) CHARLES P. WILSON,

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COMMERCIAL & INDUSTRIAL ASSOCIATION OF GHENT (Belgium).

GHENT, with its large factories, its important commercial houses, and its population of 200,000 inhabitants, is, by its topographical advantages, one of the most favourable centres for the development of industry, commerce, and navigation, and offers immense facilities in the way of transport. Two large rivers, the Scheldt and the Lys, meet here, and, supplemented by several canals, form the waterways of the two Flanders (Hainault), and the North of France. The Belgian Government and several private Railway Companies have made Ghent the starting point of lines to all parts of the Continent. It is one of the most direct routes from the sea to North France, South-West Germany, Alsace-Lorraine, Switzerland, and Italy.

The port is capable of accommodating vessels up to 2,500 tons burthen, and for a number of years several services of steamers have been plying twice a week between Ghent and various English and Dutch ports.

Spacious sheds and appliances of the most improved kind have been erected along the quays. Ships can discharge direct on the railway truck or cart, into entrepôt, on to quay, or under the sheds.

Movable cranes, lifts, and all appliances necessary for speed and economy are at the disposal of the trading public, as are also the Sheds and Bonding Warehouses. Dry Docks, 426 feet in length and 42 in breadth, are in course of construction, and will probably be finished at the end of the year.

The water in the old dock, the timber dock, and at the "Avant Port" is on the same level. These docks are very spacious, and offer every facility and security for the manœuvring of ships.

The Navigation, Pilotage, Police, Railways and Customs Offices are all on the dock, and the authorities make a duty of affording all possible advantages and facilities to the shipping trade in general. Old and well established commercial houses, ship brokers, and forwarding agents exist on the spot.

The only compulsory taxes for vessels are Dock dues, which are very moderate. No other tax or duty is imposed.

The use of the Sheds, Bonding Warehouses, and appliances for loading, unloading, or moving of goods is optional, and when same are employed the charges are very moderate.

The canal which joins the port to the sea is all along 183 feet broad at water-level, and offers every security over its short extent of 30 kilometres. It is open both night and day, and navigation thereon is entirely free.

All vessels up to 90 metres (295 feet) in length, and 11.50 metres (38 feet) beam, and not exceeding 5.40 metres (17½ feet) draught, can enter the lock at the entrance of the canal, and come right up to Ghent throughout the whole year.

SALVAGE and WRECK RAISING

No. VI. (ILLUSTRATED.)

By JOHN JAMES FLETCHER, C.E.

THIS little book, of about 70 pages, deals with a subject interesting to Shipowners, Underwriters, and others connected with Maritime pursuits. It is a reprint from the *Shipping World* of a serial article which ran through several numbers of that journal.

It comprises, amongst other matters, interesting information concerning the ancient laws affecting Salvage, and those now in force; particulars of the constitution, history, and objects of the London, Liverpool, and Glasgow Salvage Associations, with instances of the more notable services to the shipping community that have been performed by those organisations.

It gives also reference to the principal Salvage Contractors and Companies throughout the world.

Dealing with the history of Salvage it recounts the adventures of Sir William Phipps; and upon the authority of Dionysius, of Halicarnassus, relates how Alexander the Great made a descent in a diving bell.

Tracing the progress of the Diving Bell and the Diver's Equipment, it shows, by illustrations, several forms of early contrivances, bringing the reader down by stages to the latest modern appliances.

Information is given as to feats of endurance on the part of Divers, and upon the subjects of Submarine Lamps, Leak Stoppers, and other means of stopping holes in a wrecked ship.

This is followed by a Table of Constants for assisting the calculation of the dead weight of a wreck to be lifted, which leads on to the consideration of Ropes, Chains, Wire Ropes and Bands, and other lifting tackle.

The most modern forms of Pumps, by several makers, are then illustrated, and due consideration is given to the admirable lifting Lighters of the Thames Conservancy.

Diagrams are also given of other Pontoons which have been used in successful instances of wreck raising.

Although dealing with a technical subject, the book will be found of interest to everyone who is in any way concerned about shipping, and the low price at which the present issue is made puts it within the reach of everyone having any interest—historical, legal, or mechanical—in the subject it treats.

Price 6d., by Post 7d.

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President.—His Grace the DUKE OF NORTHUMBERLAND, K.G.

General Summary of the Services of the Royal National Lifeboat Institution during 1889.

Number of lives rescued by Lifeboats in addition to 17		£	s.	d.
Vessels saved by them	... .. 420			
Number of lives saved by Shore Boats, &c.	... .. 207			
Amount of pecuniary rewards for saving life	... ..	5,103	11	0
Honorary rewards :—Silver Medals	... .. 3			
Second Service Clasps	... .. 3			
Binocular Glasses, &c.	... .. 11			
Framed Certificates	... .. 8			
Thanks on Vellum	... .. 25			
Total	... 50 627	£5,103	11	0

In addition, the Society expended £46,817 on various Lifeboat Establishments on the coasts of England, Scotland, and Ireland.

The Committee of the Institution acknowledge with gratitude the liberal support which they have received from the British public during the last few years—a support which has enabled them to establish their present great fleet of 300 Lifeboats on the shores of the United Kingdom. Deeply sensible, however, of the great responsibility that rests on them to maintain their fleet in a thoroughly efficient state, and its crews practised in the management of their boats, which can only be effected by a large and *permanent Annual Income*, they earnestly appeal to all classes of their countrymen to continue to aid them in upholding and perpetuating so great and truly national a work.

The number of lives saved, either by the Lifeboats of the Society, or by special exertions, for which it has granted rewards, since its formation, is 35,134, for which services 97 gold medals, 1,030 silver medals and clasps, 184 binocular glasses, 15 telescopes, 4 aneroid barometers 9 framed certificates of service, and £111,216 have been given as rewards.

The expense of a Lifeboat, its equipment, transporting carriage and boat-house averages £1,050, in addition to £70 a year needed to keep the station in a state of efficiency.

Annual Subscriptions and Donations are earnestly solicited, and will be thankfully received by the bankers of the Institution, Messrs. Coutts & Co., 59, Strand; Messrs. Berries, Farquhar & Co., St. James's Street; Messrs. Hoare, 37, Fleet Street London; by all the other Bankers in the United Kingdom; and by the Secretary, Charles Dibdin, Esq., at the Office of the Institution, 14, John Street, Adelphi, London, W.C.

Marine Directory.

THE UNITED KINGDOM.

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Telegrams—"ANGEL, ABERAYRON."

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285 " 47 " 17½ "

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